DOCUMENT RESUME

ED 246 205 CE 039 186

TITLE	National Survey of Professional Administrative, Technical, and Clerical Pay, March 1983. Bulletin 2181.
INSTITUTION	Bureau of Labor Statistics (DOL), Washington, D.C.
PUB DATE	Sep 83
NOTE	91p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 (Stock No. 029-001-02763-0).
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Adults; *Clerical Occupations; Employment Level; *Employment Statistics; *Managerial Occupations; National Surveys; Occupational Clusters; Occupational Information; Occupational Surveys; *Professional Occupations; Salaries; *Technical Occupations; *Wages
IDENTIFIERS	United States

ABSTRACT

This survey, 24th in an annual series, provides nationwide salary data for 24 occupations spanning 101 work level categories. This information was collected from establishments in all areas of the United States except Alaska and Hawaii. The following major industrial groups were surveyed: mining; construction; manufacturing; transportation; communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services. The minimum size of the establishments surveyed was either 50, 100, or 250 employees, depending on the industry. The approximately 44,000 establishments within the scope of the survey employed slightly more than 22 million workers; just over 45 percent were professional, administrative, technical, and clerical employees. The survey presents separate occupational data for metropolitan areas and for establishments employing 2,500 workers or more. Other information contained in the data includes changes in salary levels, employment statistics, average salaries, salary distributions, pay differences by industry, and average standard weeky hours. Appendixes to the document describe the scope and method of the survey, validate the job matches, define occupations, and compare salaries in private industries with salaries of Federal employees under the General Schedule. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED246205

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

[ ] This document has been reproduced as received from the person or organization originating it.

[ ] Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1983

U.S. Department of Labor
Raymond J. Donovan, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
September 1983

Bulletin 2181

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Stock No. 029-001-02763-0

Preface

This bulletin summarizes the results of the Bureau's annual salary survey of selected professional, administrative, technical, and clerical occupations in private industry. The nationwide salary information, relating to March 1983, is representative of establishments in a broad spectrum of industries throughout the United States, except Alaska and Hawaii.

The results of the national white-collar salary survey are used for a number of purposes, including general economic analysis and wage and salary administration by private and public employers. One important use is to provide the basis for setting Federal white-collar salaries under the provisions of the Federal Pay Comparability Act of 1970. Under this act, the President has designated the Secretary of Labor, the Director of the Office of Management and Budget, and the Director of the Office of Personnel Management to serve jointly as his agent to establish pay for Federal white-collar employees.

The President's agent specifies the geographic scope of the survey, the industries to be studied, the minimum establishment size to be included, and the survey occupations. The agent also formulates comparability procedures, uses the survey results to develop statistical paylines, and recommends comparability pay adjustments to the President.

The Bureau of Labor Statistics, under the Federal Pay Comparability Act of 1970, is responsible for conducting the survey and advising on the feasibility of proposed survey changes. The Bureau prepares a list of establishments covered by the survey, draws a probability-based sample from this list, collects, tabulates, and reports the data. As mentioned above, however, the survey design is the responsibility of the President's Pay Agent. It should also be emphasized that this survey, like other salary surveys, does not provide mechanical answers to pay policy questions.

The occupations studied span a wide range of duties and responsibilities. The occupations selected were judged to be (a) surveyable in industry within the framework of a broad survey design, (b) representative of occupational groups which generally are numerically important in industry as well as in the Federal Service, and (c) essentially of the same nature in both the Federal and private sectors.

Occupational definitions used to collect salary data (appendix C) reflect duties and responsibilities in private industry; however, they are also designed to be translatable to specific General Schedule (GS) grades applying to Federal employees. Thus, the definitions of some occupations and work levels were limited to specific elements that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Office of Personnel Management worked jointly to prepare the definitions.

The survey could not have been conducted without the cooperation of the many firms whose salary data provide the basis for the statistical information in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that contributed to survey planning, wishes to express appreciation for the cooperation it has received.

This survey was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Pay and Employee Benefit Levels. Mark S. Sieling prepared the analysis in this bulletin. Computer programming and tabulation of data were developed by Richard S. Schidt under the direction of Richard W. Maylott, Office of Statistical Operations. Terry Burdette and Larry Huff, of the Office of Survey Design, were responsible for the sampling design and other statistical procedures. Field work and data collection for the survey were directed by the Bureau's Assistant Regional Commissioners for Operations.

Although only nationwide salary data are presented in this bulletin, salary data for clerical occupations and for drafters and some computer occupations are available for each metropolitan area in which the Bureau conducts area wage surveys. These area reports also include information on the incidence of employee benefits such as paid vacations, holidays, and health insurance, and pension plans for nonsupervisory office workers.

In 1982, a survey of employee benefits in private industry covered the same scope as the national survey of professional, administrative, technical, and clerical pay. The findings of the survey appear in *Employee Benefits in Medium and Large Firms, 1982,* Bulletin 2176 (Bureau of Labor Statistics, 1983). Copies are for sale from the Government Printing Office or the Bureau's regional offices listed on the inside back cover of this bulletin.

Material in this publication is in the public domain and, with appropriate credit, may be reproduced without permission.

Contents

	Page
Summary	1
Characteristics of the survey	1
Employment	1
Changes in salary levels	1
Average salaries, March 1983	2
Salary levels in metropolitan areas	4
Salary levels in large establishments	5
Salary distributions	5
Pay differences by industry	5
Average standard weekly hours	6
Text tables:	
1. Percent increases in average salaries by occupation, 1973-83	2
2. Percent increases in average salaries by work level category, 1973-83	2
3. Distribution of work levels by degree of salary dispersion, March 1983	6
Reference tables:	
Average salaries:	
1. United States	10
2. Metropolitan areas	12
3. Establishments employing 2,500 workers or more	14
Employment distribution by salary:	
4. Professional and administrative occupations	16
5. Technical support occupations	24
6. Clerical occupations	26
7. Occupational employment distribution: By industry division	29
8. Relative salary levels: Occupation by industry division	29
9. Average weekly hours: Occupation by industry division	30
Charts:	
1. Salaries in professional and technical occupations, March 1983	7
2. Salaries in administrative occupations, March 1983	8
3. Salaries in clerical occupations, March 1983	8
4. Relative employment in selected occupational groups by industry division, March 1983	9
Appendixes:	
A. Scope and method of survey	31
B. Job match validation	35
C. Occupational definitions	36
D. Comparison of salaries in private industry with salaries of Federal employees under the Genaral Schedule	76

Professional, Administrative, Technical, and Clerical Pay, March 1983

Summary

Average salaries for selected white-collar occupations in medium- and large-size establishments increased less in the year ended March 1983 than in the previous 2 years.[1] For the 24 occupations included in the survey, increases ranged from 4.2 percent to 9.7 percent. For all but two of the occupations, the increases were below those recorded in 1981 or 1982.

Average monthly salaries for the 101 occupational levels studied ranged from $809 for clerks performing routine filing to $7,076 for the highest level of attorneys surveyed. For most occupations, salary levels in metropolitan areas and in large establishments were higher than the average for all establishments within the scope of the survey. Among the industry divisions represented in the survey, public utilities usually reported the highest salaries while finance, insurance, and real estate industries generally reported the lowest salaries and the shortest standard weekly hours.

Characteristics of the survey

This survey—24th in an annual series—provides nationwide salary data for 24 occupations spanning 101 work level categories. This information was collected from establishments in all areas of the United States, except Alaska and Hawaii. The following major industrial groups were surveyed: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services. The minimum size of the establishments studied was either 50, 100, or 250 employees, depending on the industry.[2]

Occupations are divided into appropriate work levels based on duties and responsibilities (see appendix C). The number of work levels—designated by roman numerals, with level "I" the lowest—varies from occupation to occupation, as do degrees of difficulty and responsibility.[3]

The number of levels in each occupation ranges from one for messengers to eight for engineers. These work levels, however, are not intended to represent all the workers in a specific occupation. Thus, the survey does not present comparisons of overall occupational salary levels, such as between accountants as a group and engineers.

The approximately 44,000 establishments within the scope of the survey employed slightly over 22 million workers; just over 45 percent were professional, administrative, technical, and clerical employees. Of these white-collar workers, 18 percent were in occupations for which salary data were developed. The survey presents separate occupational data for metropolitan areas—where over nine-tenths of the white-collar workers were employed—and for establishments employing 2,500 workers or more.

Employment

Occupational employment varied widely, reflecting both actual differences among occupations and differences in the range of duties and responsibilities covered by the definitions. For example, there were 528,000 incumbents in the eight levels of engineers, accounting for about seven-tenths of the 738,000 professional employees; corporate attorneys, in contrast, numbered under 14,000—a figure that does not include those in legal firms. The occupation of programmer/programmer analyst had 139,000 employees in five work levels, or approximately seven-tenths of the employees in all administrative jobs surveyed, which also include buyers, job analysts, and directors of personnel. Engineering technicians accounted for about two-fifths of the 265,400 technical workers, followed by drafters (three-tenths) and computer operators (approximately one-fourth). Secretaries constituted the largest clerical occupation, accounting for just over two-fifths of the 695,400 clerical work force. The next largest clerical occupation was accounting clerk with almost three-tenths of the total.

Changes in salary levels

Following substantial increases in both 1980-81 and 1981-82, salary levels for most of the survey jobs rose moderately in the year ended March 1983. (See text table 1.) All but two of the 1983 increases, which ranged

[1] For results of the 1981 and 1982 surveys, see BLS Bulletins 2108 and 2145.

[2] See appendix A for a full description of the scope of the survey.

[3] The roman numerals do not necessarily identify equal levels of work among occupations. For example, public accountant levels I to IV equate to accountant levels II to V while attorney I equates to accountant III and public accountant II. For more information, see appendix D.

Text table 1. Percent increases in average salaries by occupation, 1973-83[1]

Occupation	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977	1977 to 1978	1978 to 1979	1979 to 1980	1980 to 1981	1981 to 1982	1982 to 1983
Professional, administrative, and technical support:										
Accountants	6.1	9.8	6.4	7.8	8.3	8.0	9.2	10.0	9.6	6.9
Chief accountants	7.2	8.6	6.6	10.5	8.0	7.7	11.3	9.5	11.4	4.2
Auditors	5.2	6.8	5.5	6.8	8.2	6.5	8.8	10.3	9.4	6.1
Public accountants	[2]	[2]	[2]	[2]	[2]	[2]	4.2	7.9	6.6	7.1
Job analysts	6.1	7.5	6.0	6.5	7.2	8.6	8.1	7.6	9.2	6.7
Directors of personnel	7.2	6.1	7.8	9.1	10.0	7.5	11.2	11.4	9.6	8.3
Attorneys	5.8	7.6	6.1	5.4	9.1	8.9	9.3	9.8	11.4	7.6
Buyers	6.0	9.2	6.7	7.0	7.8	7.0	8.1	9.8	9.4	6.2
Chemists	7.1	10.1	6.6	7.0	9.0	7.6	9.8	9.4	10.4	5.8
Engineers	5.4	8.4	6.8	6.4	9.0	8.4	9.8	10.9	10.2	7.1
Engineering technicians	6.0	9.0	8.1	7.2	7.1	7.6	11.0	10.2	9.4	5.9
Drafters	6.7	8.0	7.4	6.0	7.1	[3]	11.8	10.9	8.4	7.6
Computer operators	[3]	[3]	[3]	5.4	8.5	7.2	8.3	[3]	8.9	6.8
Photographers	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[3]	9.7	8.1
Programmers/programmer analysts	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[3]	6.5
Clerical:										
Accounting clerks	6.9	7.7	7.2	6.9	6.2	[3]	8.9	9.6	8.9	8.1
File clerks	5.4	9.6	6.4	5.5	9.7	5.5	9.3	8.0	7.2	6.4
Key entry operators	7.3	9.9	7.6	5.9	7.1	6.8	9.1	8.2	9.4	7.3
Messengers	5.6	10.1	7.4	7.5	6.0	6.8	5.5	9.7	6.4	9.2
Personnel clerks/assistants	[2]	[2]	[2]	[2]	[2]	[2]	8.6	[3]	10.2	9.7
Purchasing assistants	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[3]	9.3
Secretaries	[3]	[3]	[3]	6.4	6.5	7.3	9.6	[3]	9.2	7.1
Stenographers	6.5	11.6	8.0	7.9	8.2	12.1	10.1	12.1	13.8	8.6
Typists	6.7	9.9	7.1	6.2	8.0	8.5	8.9	10.2	10.1	6.8

[1] For data on survey periods from 1960 to 1970, see the 1979 edition of this publication, Bulletin 2045; for 1970–73, see the 1982 edition, Bulletin 2145.
[2] Not surveyed.
[3] Comparable data for both years not available.

NOTE: For method of computation, see appendix A.

from 4.2 percent for chief accountants to 9.7 percent for personnel clerks/assistants, were below those recorded in either of the previous two years. (Messengers and public accountants were the exceptions.) Most of the occupational increases fell between 6.0 and 8.5 percent in 1983 compared to 9-10 percent in 1982 and 9-11 percent in 1981.

During the 1982-83 period, average salaries increased at about the same pace for three groupings of occupational work levels which equate to various grades of the Federal Government's General Salary Schedule— GS 1-4; GS 5-9; and GS 11-15 (text table 2). Since 1973, however, cumulative increases have been largest for the journeyman and senior levels of professional and administrative occupations (grades 11-15) and smallest for the middle group of work levels (grades 5-9).

Average salaries, March 1983

Reflecting the wide range of duties and responsibilities covered by the occupations studied, average monthly salaries ranged from $809 for file clerks I to $7,076 for the top level of attorneys (table 1).[4] The following paragraphs summarize the various occupations studied.

Accountants' average monthly salaries ranged from $1,627 for beginning professional accountants (level I) to $4,317 for specialists in complex accounting systems (level VI). Salaries of the most populated group (level III) averaged $2,279 a month. Nearly three-fifths of the accountants surveyed were in manufacturing industries;

Text table 2. Percent increases in average salaries by work level category,[1] 1973-83

Period[2]	Group A (GS grades 1–4)	Group B (GS grades 5–9)	Group C (GS grades 11–15)
1973–83	116.4	113.5	122.0
1973–74	6.2	5.7	6.2
1974–75	9.1	8.6	8.8
1975–76	7.6	6.4	6.5
1976–77	6.9	6.3	7.7
1977–78	7.5	8.0	8.8
1978–79	7.2	7.5	8.0
1979–80	9.1	10.1	9.3
1980–81	9.8	9.6	10.2
1981–82	9.5	9.4	10.4
1982–83	7.4	7.3	7.2

[1] Group A contains survey classifications equating to GS grades 1–4 of the Federal Government's General Salary Schedule; Group B covers GS grades 5–9; and Group C, GS grades 11–15. See appendix D, table D-1, for a listing of survey levels that equate to each GS grade.
[2] For data on survey periods from 1960 to 1970, see the 1979 edition of this publication, Bulletin 2045; for 1970–73, see the 1982 edition, Bulletin 2145.

[4] Despite this wide difference, salary averages for jobs of equivalent levels of work often fell within a relatively narrow band. For example, monthly averages for the following work level equivalents (Federal grade level 13) differed by $189 or 4 percent: Accountant VI ($4,317); chief accountant III ($4,441); attorney IV ($4,432); director of personnel III ($4,275); chemist VI ($4,252); and engineer VI ($4,288).

public utilities and the finance, insurance, and real estate sector each accounted for about one-tenth.

Chief accountants who adapt accounting systems with only a few and relatively stable functions and work processes (level I) averaged $2,807 a month. At level IV, those who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a company with numerous and varied functions and work processes averaged $5,660 a month.[3]

Work levels for chief accountants are determined by the degree of authority and responsibility, the technical complexity of the accounting system, and, to a lesser degree, the size of the professional staff (usually 1-2 accounts at the first levels to as many as 40 accountants at level IV). Of the chief accountants surveyed, about six-tenths were employed in manufacturing industries and just over one-eighth in the finance, insurance, and real estate sector.

Auditors at the trainee level (level I) averaged $1,560 a month and auditors IV, who conduct complex financial audits, averaged $2,841. Manufacturing industries employed about two-fifths of the auditors while the finance, insurance, and real estate sector employed one-third.

Public accountants at the entry level, who receive practical experience in applying the principles, theories, and concepts of accounting and auditing (level I), averaged $1,556 a month. The highest level of public accountants (level IV), who direct the fieldwork for large or complex audits, averaged $2,428 a month. This occupation was only found in public accounting firms, which are a part of the selected services industry group.

Attorneys are classified based upon the difficulty of their assignments and responsibilities. Attorneys I, who include new law graduates with bar membership and those whose work is relatively uncomplicated due to clearly applicable precedents and well-established facts, averaged $2,343 a month. Attorneys in the top level surveyed (VI) averaged $7,076. These attorneys deal with legal matters of major importance to the organization (or corporation), and usually report only to general counsels or, in very large firms, to their immediate deputies. Finance, insurance, and real estate industries employed nearly two-fifths of the attorneys and manufacturing industries employed just over three-tenths.[4]

Buyers who purchase "off-the-shelf" and readily available items and services from local sources (level I) averaged $1,593 a month. Buyers IV, who purchase large amounts of highly complex and technical items, materials, or services, averaged $2,964. Approximately four-fifths of the buyers studied were employed by manufacturing industries.

Programmers/programmer analysts at the trainee level who are developing basic programming skills (level I) averaged $1,648 a month. Those at level V, who are either supervisors, team leaders, staff specialists, or consultants responsible for complex programming involving some systems analyst work, averaged $3,177 a month. Manufacturing industries employed two-fifths of all programmers/programmer analysts surveyed; finance, insurance, and real estate, just over one-fourth; and selected services and public utilities about one-tenth each.

Personnel management occupations are represented by four levels of *job analysts* and five levels of *directors of personnel.* Job analysts I averaged $1,658 a month compared with $2,757 for level IV. Under general supervision, job analysts IV analyze and evaluate a variety of the more difficult jobs and may participate in the development and installation of job evaluation and compensation systems. Directors of personnel are limited by definition to those who, at a minimum, are responsible for administering a job evaluation system, employment and placement functions, and employee relations and services. Those with significant responsibility for administering actual contract negotiations with labor unions as the principal company representative are excluded. Various combinations of duties and responsibilities determine the work level.

Among personnel directors, average monthly salaries ranged from $2,723 for level I to $5,220 for level IV.[3] Manufacturing industries employed about one-half of the job analysts and two-thirds of the directors of personnel included in the study; the finance, insurance, and real estate industries ranked next with nearly three-tenths of the job analysts and one-seventh of the directors of personnel.

Chemists and engineers each are surveyed in eight levels[5] starting with a professional trainee level typically requiring a B.S. degree. The highest level surveyed involves either full responsibility over a broad, complex, and diversified chemical or engineering program, with several subordinates each directing large and important segments of the program, or individual research and consultation in problem areas where the chemist or engineer is a recognized authority and where solutions represent a major scientific or technological advance.[5] Average monthly salaries ranged from $1,780 for chemists I to $5,039 for chemists VII, the highest level for which data could be published, and from $2,130 for engineers I to $4,847 for engineers VII and $5,578 for engineers VIII.

Level IV chemists and engineers, the largest groups in each profession and representing fully experienced employees, averaged $2,953 and $3,061 a month respec-

[3] Data for chief accountants V, directors of personnel V; chemists VIII; photographers I and V; and personnel clerks/assistants V did not meet publication criteria for this survey.

[4] The survey excludes establishments primarily offering legal advice or services.

[5] See footnote 5.

[5] See footnote 5.

[5] The definition recognizes that top positions in some companies with unusually extensive and complex chemical or engineering programs exceed this level.

tively. Employment of chemists and engineers was highly concentrated in manufacturing industries (89 percent of the chemists and 70 percent of the engineers). Most of the remaining chemists were associated with research and development laboratories. Engineers were also found in significant numbers in establishments engaged in research and development, project design, and public utilities.

Engineering technician is a five-level series limited to employees providing semiprofessional technical support to engineers. These technicians work with engineers in such areas as research, design, development, testing, or manufacturing process improvement, and utilize electrical, electronic, or mechnical components or equipment. Technicians involved in production or maintenance work are excluded. Engineering technicians I, who perform simple routine tasks under close supervision or from detailed procedures, averaged $1,304 a month. Engineering technicians V, who work on more complex projects under general guidelines supplied by a supervisor or professional engineer, averaged $2,360. Salaries for intermediate levels III and IV, containing a majority of the technicians surveyed, averaged $1,799 and $2,088, respectively.

About three-fourths of the engineering technicians were employed in manufacturing and just over one-sixth in selected services. The ratio of technicians to engineers was about 1 to 4 in all manufacturing industries combined. In public utilities, the ratio was 1 to 6; in mechanical and electrical equipment manufacturing, it was 1 to 3; and in research, development, and testing laboratories, 2 to 5.

Drafter salary levels ranged from $1,012 a month for level I, who trace or copy finished drawings, to $2,316 for level V, who work closely with design originators in preparing unusual, complex, or original designs. Slightly under two-thirds of the drafters were in manufacturing firms and one-fifth in selected services.

Computer operators are classified on the basis of responsibility for problem solving, variability of assignments, and relative sophistication of their equipment. Computer operators I, whose work consists of on-the-job training, averaged $1,040 a month. The largest group surveyed, level III, averaged $1,416, and the highest level (VI) averaged $2,100. Approximately two-fifths of all computer operators surveyed were located in manufacturing industries; about one-fourth in finance, insurance, and real estate; and just over one-tenth in selected services.

Photographers studied in the survey range from those who used standard still cameras to take pictures involving limited problems of speed, motion, contrast, or lighting (level II) to those using special-purpose cameras under technically demanding conditions (level IV).[10] Photographers working for media establishments, such as newspapers or advertising agencies, were excluded. The average monthly salary for level II photographers was $1,703 compared with $2,235 for level IV's. Manufacturing industries employed almost three-fourths of the photographers studied.

Among the survey's nine *clerical jobs,* secretary was the most heavily populated. Average monthly salaries ranged from $1,228 for level I secretaries to $1,928 for level V's. Average salaries of $1,359 and $1,614 were reported for stenographers I and II. Typists I averaged $952 and those at level II, $1,257 a month.

Accounting clerks performing simple and routine clerical accounting operations (level I) averaged $933 a month. Level IV clerks who maintain journals or subsidiary ledgers averaged $1,621. Three-fourths of all accounting clerks were classified in levels II and III, which averaged $1,122 and $1,339 a month, respectively.

Personnel clerks/assistants who perform routine tasks requiring a knowledge of personnel rules and procedures (level I) averaged $1,075 a month. Level IV assistants, who provide paraprofessional support such as interviewing and recommending placement for well-defined occupations, averaged $1,683.[11]

Level I purchasing assistants examine and review routine purchasing agreements. Their monthly average of $1,236 compares with $2,005 for top level III assistants, who prepare complicated purchase documents, expedite the purchase of highly specialized items, or provide detailed technical support to buyers.

Clerical workers generally were highest paid in manufacturing, mining, and public utilities and lowest paid in finance, insurance, real estate, and retail trade. Slightly more than two-fifths of the clerical employees surveyed were employed in manufacturing industries. The finance, insurance, and real estate industries and public utilities also employed large numbers of clerical workers, accounting for about one-fourth and one-tenth of the total, respectively.

Salary levels in metropolitan areas

For most occupational levels, average salaries in metropolitan areas (table 2) were slightly higher than national averages (table 1). In only 10 instances, however, did these differences exceed 1 percent.

About nine-tenths of the employees surveyed were located in metropolitan areas. The proportion, however, varied among occupations and work levels. More than 95 percent of public accountants, attorneys, job analysts, and messengers were in metropolitan areas. In 75 of the 101 work levels providing publishable data, at least 90 percent of the workers were in metropolitan areas. It is apparent, therefore, that for most work levels, average salaries in metropolitan areas were almost the same as those for all areas combined.

[10] See footnote 5.

[11] See footnote 5.

Salary levels in large establishments

Large establishments—those employing 2,500 workers or more—accounted for 37 percent of all employees in the 91 occupational work levels for which comparisons were possible (table 3). The proportion of workers in large establishments ranged from about one-tenth of file clerks I to just over three-fourths of photographers IV. Large establishments commonly employed a majority of the workers at the highest levels of professional, administrative, and technical support occupations. Among clerical occupations, however, they employed a majority of only purchasing assistants III's and both levels of stenographers.

Salary levels in large establishments expressed as percents of levels in all establishments combined ranged from 97 to 126. Salary levels in large establishments were higher than the all-establishment average by 5 percent or more in all but 3 of the clerical levels (both stenographer levels and purchasing assistants III), but for two-fifths of the 65 nonclerical levels, as shown in the following tabulation (the all-establishment average for each occupational level = 100):

	Professional, administrative, and technical	*Clerical*
Total number of levels	65	26
95-99 percent	3	-
100-104 percent	37	3
105-109 percent	18	8
110-114 percent	6	9
115 percent and over	1	6

As expected, pay relatives were close to 100 for those work levels where large establishments contributed heavily to total employment and, consequently, to the all-establishment average.

Salary distributions

Employee distributions of monthly salaries for professional and administrative occupations are presented in table 4, for technical support occupations in table 5, and for clerical occupations in table 6. Within most work levels, the highest salary rates were more than twice as large as the lowest rates. As illustrated in charts 1-3, these differences tended to increase with each rise in the work level. Salary ranges of specific work levels in an occupation also tended to overlap each other. This reflects both salary differences among establishments and the frequent overlapping of salary ranges within individual firms.

Median monthly salaries for most work levels were slightly lower than the mean average salaries.[12] Hence, salaries in the upper halves of the arrays affected the means more than salaries in the lower halves. The relative difference between the mean and the median was less than 2 percent for 48 of the 101 work levels surveyed, from 2 to 4 percent in 37 levels, and from over 4.0 to 8.1 percent in the other 16 levels.

The degree of salary dispersion tended to be larger for clerical occupations than for professional, administrative, or technical occupations. These dispersions, shown in text table 3, reflect the middle 50 percent of employees in each work level expressed as a percent of the median salary. This eliminates the extremely low and high salaries for each comparison. In about nine-tenths of the 101 publishable work levels, the degree of dispersion ranged between 15 and 30 percent.

Salary differences within work levels reflect a variety of factors other than duties and responsibilities. These include salary structures within establishments which provide for a range of rates for each grade level; variations in occupational employment among industries (table 7 and chart 4); and regional salary differences, especially for clerical occupations.[13] Clerical employees usually are recruited locally, while professional and administrative positions tend to be recruited on a broader regional or national basis.

Pay differences by industry

Relative occupational salary levels in major industry divisions were compared to each other and to the all-industry average (table 8). Salary levels for professional, administrative, and technical occupations in manufacturing industries tended to be closest to the all-industry average. Manufacturing, however, accounted for more employment than any other sector, except in the case of attorneys and public accountants. Relative salary levels were generally highest in mining and public utilities.

For most occupations studied, relative salary levels were lowest in the retail trade and finance, insurance, and real estate industries. Where these industries employed a substantial proportion of workers in an occupation, the all-industry average was dampened; consequently, relative levels in such industries as manufacturing and public utilities tended to be elevated above the all-industry average. For example, relative pay levels of messengers in manufacturing (110 percent of the all-industry average) and public utilities (120 percent) reflect the influence of lower salaries for about two-fifths of these workers employed in finance, insurance, and real estate industries. These industries, however, also reported slightly shorter average standard workweeks than other industries.

[12] Median monthly salaries are the amounts below and above which 50 percent of the employees are found. The mean salary is the weighted average of all salaries.

[13] For analyses of interarea pay differentials in clerical salaries, see *Wage Differences Among Metropolitan Areas, 1982*, BLS Summary 83-5, and Mark Sieling, "Clerical Pay Differences in Metropolitan Areas, 1961-80," *Monthly Labor Review*, July 1982, pp. 10-14.

Text table 3. Distribution of work levels by degree of salary dispersion, March 1983

Occupation	Number of work levels	Number of levels having degree of dispersion[1] of—				
		Under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over
All occupations	101	5	22	45	23	6
Accountants	6	–	1	5	–	–
Chief accountants	4	–	2	2	–	–
Auditors	4	–	–	4	–	–
Public accountants	4	2	1	1	–	–
Job analysts	4	–	–	2	1	1
Directors of personnel	4	–	4	–	–	–
Attorneys	6	–	–	5	1	–
Buyers	4	–	–	4	–	–
Chemists	7	–	4	3	–	–
Engineers	8	3	5	–	–	–
Engineering technicians	5	–	2	3	–	–
Drafters	5	–	–	4	–	1
Computer operators	6	–	1	1	4	–
Photographers	3	–	–	2	1	–
Programmers/programmer analysts	5	–	2	2	1	–
Clerical workers	26	–	–	7	15	4

[1] Degree of dispersion equals the salary range of the middle 50 percent of employees in a work level expressed as a percent of the median salary for that level.

Average standard weekly hours

The distribution of average weekly hours (rounded to the nearest half hour) is shown in table 9 for each occupation by major industry division. Average weekly hours were lower in finance, insurance, and real estate (about 38 hours for most occupations) than in other industries (39 to 40 hours). Average weekly hours have been fairly stable over the past decade.[14] Standard weekly hours, the base for regular straight-time salary, were obtained for individual employees in the occupations studied. When individual hours were not available, particularly for some higher level professional and administrative positions, the predominant workweek of the office work force was used as the standard workweek.

[14] For information on scheduled weekly hours of office workers employed in metropolitan areas, see *Area Wage Surveys, Selected Metropolitan Areas, 1981*, Bulletin 3010-72 (Bureau of Labor Statistics, 1983).

Chart 1. Salaries in professional and technical occupations, March 1983

(Mean monthly salaries and ranges within which fell 80 percent of employees)

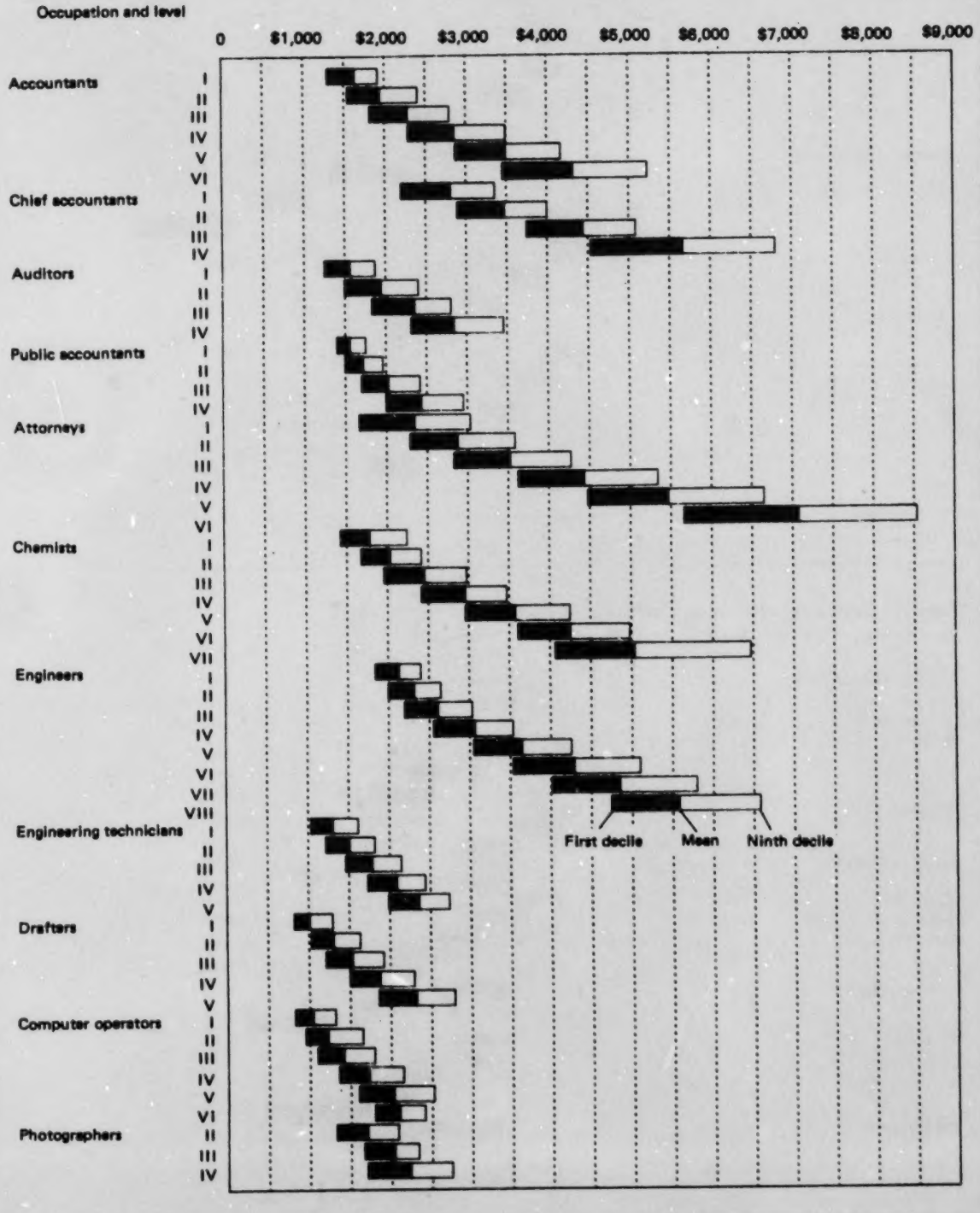


Chart 2. Salaries in administrative occupations, March 1983

(Mean monthly salaries and ranges within which fell 80 percent of employees)

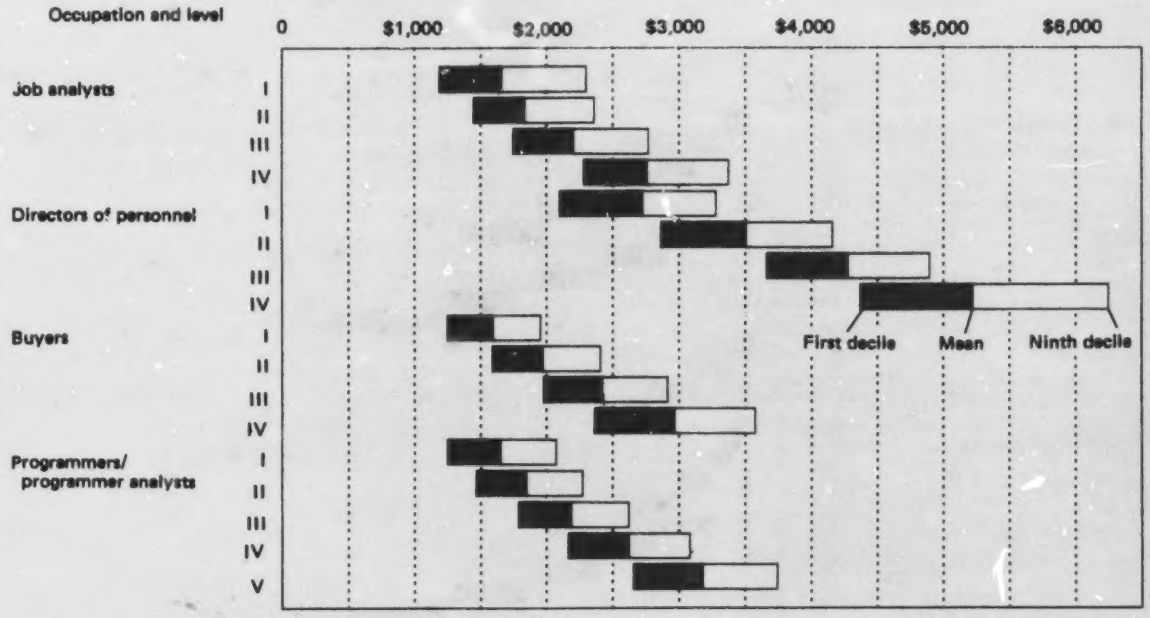


Chart 3. Salaries in clerical occupations, March 1983

(Mean monthly salaries and ranges within which fell 80 percent of employees)

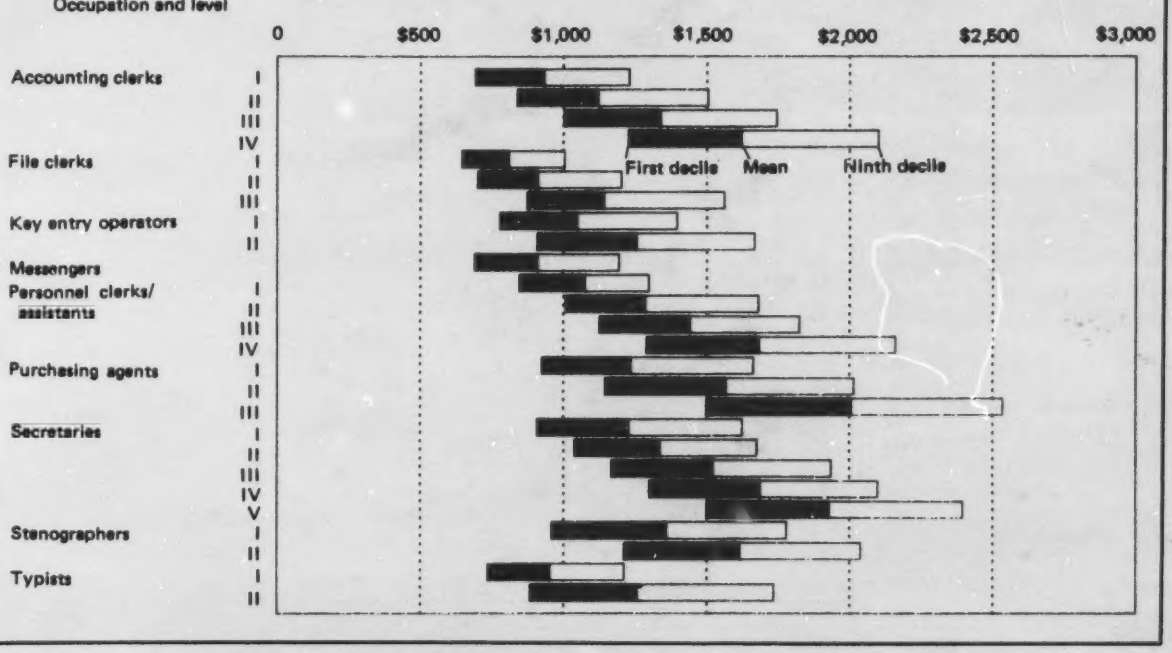
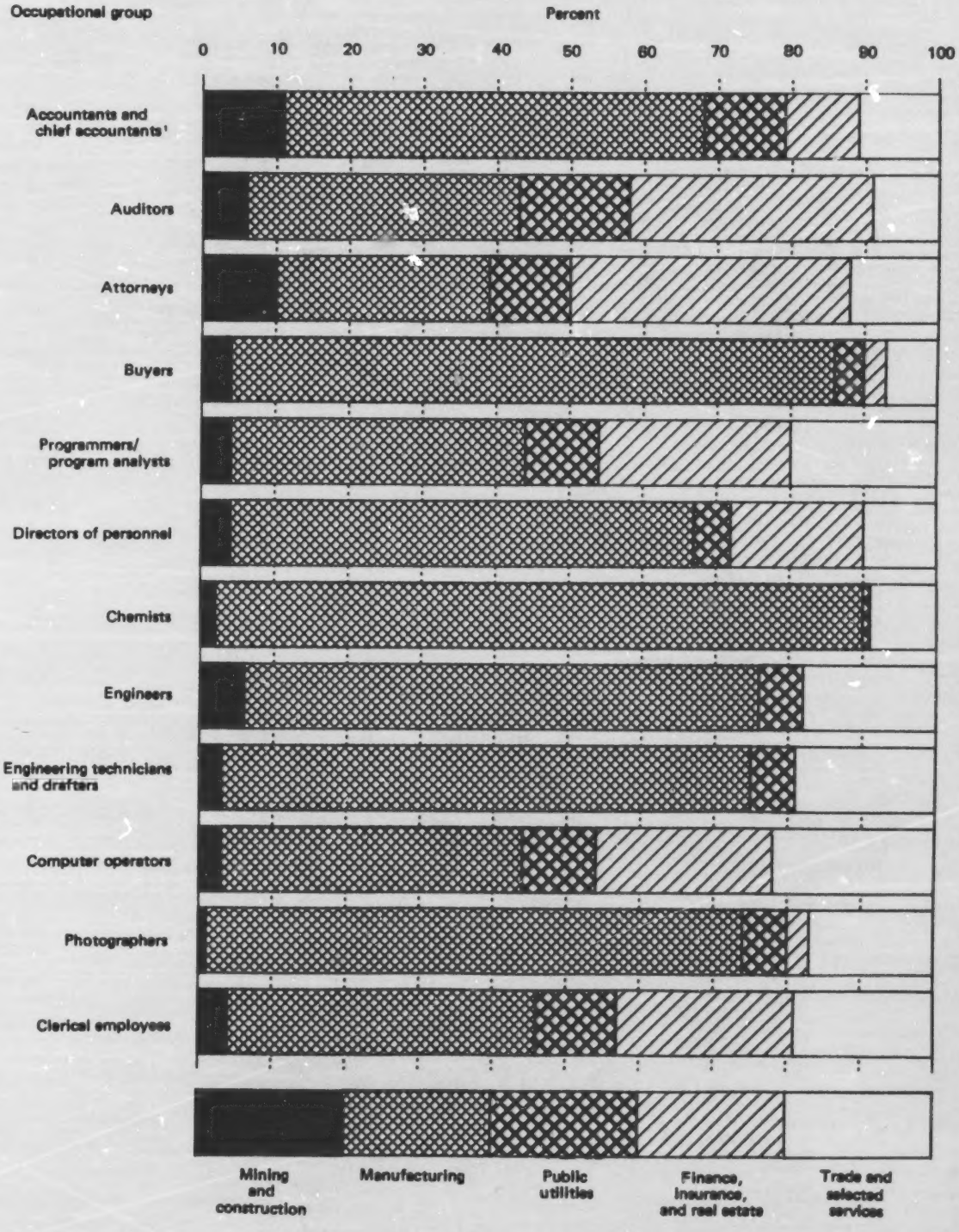


Chart 4. Relative employment in selected occupational groups by industry division, March 1983



[1]Public accountants are not included. This occupation is found only in accounting, auditing, and bookkeeping services in the selected services industry group.

Table 1. Average salaries: United States

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL [2]	NUMBER OF EMPLOYEES [3]	MONTHLY SALARIES [4]				ANNUAL SALARIES [4]			
		MEAN	MEDIAN	MIDDLE RANGE [5]		MEAN	MEDIAN	MIDDLE RANGE [5]	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
ACCOUNTANTS AND AUDITORS									
ACCOUNTANTS I	14,416	$1,627	$1,627	$1,474	$1,791	$19,519	$19,523	$17,693	$21,491
ACCOUNTANTS II	24,627	1,939	1,895	1,708	2,136	23,264	22,740	20,496	25,632
ACCOUNTANTS III	38,498	2,279	2,249	2,082	2,506	27,346	26,989	24,982	30,070
ACCOUNTANTS IV	22,037	2,854	2,782	2,523	3,149	34,246	33,384	30,276	37,785
ACCOUNTANTS V	7,319	3,489	3,416	3,099	3,888	41,862	40,992	37,185	45,688
ACCOUNTANTS VI	1,423	4,317	4,248	3,832	4,758	51,798	50,988	45,982	57,088
AUDITORS I	1,578	1,568	1,558	1,374	1,749	18,823	18,689	16,493	20,992
AUDITORS II	3,530	1,941	1,945	1,708	2,166	23,293	23,340	20,488	25,998
AUDITORS III	4,762	2,354	2,345	2,083	2,582	28,245	28,140	24,996	30,984
AUDITORS IV	2,431	2,841	2,782	2,500	3,110	34,091	33,387	30,000	37,322
PUBLIC ACCOUNTANTS I	10,884	1,536	1,541	1,466	1,624	18,669	18,493	17,593	19,492
PUBLIC ACCOUNTANTS II	11,168	1,715	1,667	1,599	1,833	20,579	20,004	19,192	21,991
PUBLIC ACCOUNTANTS III	8,498	2,023	1,974	1,820	2,167	24,278	23,691	21,838	26,000
PUBLIC ACCOUNTANTS IV	5,395	2,428	2,374	2,166	2,650	29,134	28,489	25,998	31,800
CHIEF ACCOUNTANTS I	857	2,807	2,811	2,495	3,099	33,683	33,737	29,940	37,183
CHIEF ACCOUNTANTS II	1,195	3,472	3,416	3,165	3,749	41,664	40,992	37,983	44,982
CHIEF ACCOUNTANTS III	741	4,441	4,372	4,048	4,815	53,286	52,464	48,561	57,777
CHIEF ACCOUNTANTS IV	246	5,660	5,555	5,044	6,473	67,919	66,660	60,528	77,700
ATTORNEYS									
ATTORNEYS I	1,311	2,343	2,291	2,041	2,666	28,119	27,489	24,498	31,987
ATTORNEYS II	2,983	2,875	2,799	2,525	3,167	34,502	33,589	30,300	38,004
ATTORNEYS III	3,918	3,523	3,438	3,108	3,869	42,271	41,256	37,296	46,428
ATTORNEYS IV	3,342	4,432	4,382	3,955	4,850	53,184	52,579	47,496	58,440
ATTORNEYS V	1,891	5,467	5,351	4,833	6,070	65,667	63,974	57,996	72,848
ATTORNEYS VI	492	7,076	6,997	6,225	7,916	84,917	83,966	74,700	94,992
BUYERS									
BUYERS I	6,726	1,593	1,550	1,408	1,790	19,120	18,600	16,896	21,482
BUYERS II	18,096	1,969	1,927	1,749	2,150	23,633	23,128	20,992	25,800
BUYERS III	16,259	2,419	2,380	2,151	2,628	29,033	28,556	25,807	31,537
BUYERS IV	5,366	2,964	2,916	2,668	3,261	35,570	34,992	31,702	39,134
PROGRAMMERS/ANALYSTS									
PROGRAMMERS/PROGRAMMER ANALYSTS I	14,660	1,648	1,624	1,416	1,874	19,777	19,492	16,993	22,491
PROGRAMMERS/PROGRAMMER ANALYSTS II	33,263	1,846	1,811	1,615	2,041	22,148	21,734	19,380	24,498
PROGRAMMERS/PROGRAMMER ANALYSTS III	31,833	2,185	2,166	1,991	2,388	26,224	25,990	23,914	28,654
PROGRAMMERS/PROGRAMMER ANALYSTS IV	29,142	2,628	2,588	2,374	2,844	31,546	31,060	28,489	34,128
PROGRAMMERS/PROGRAMMER ANALYSTS V	9,654	3,177	3,152	2,919	3,413	38,125	37,824	34,982	40,948
PERSONNEL MANAGEMENT									
JOB ANALYSTS I	148	1,658	1,541	1,448	1,999	19,894	18,493	17,288	23,998
JOB ANALYSTS II	443	1,833	1,749	1,624	2,089	21,992	20,992	19,492	24,188
JOB ANALYSTS III	837	2,282	2,142	1,915	2,583	26,627	25,704	22,982	30,836
JOB ANALYSTS IV	361	2,757	2,748	2,383	3,012	33,084	32,879	28,598	36,147
DIRECTORS OF PERSONNEL I	1,528	2,723	2,649	2,499	2,921	32,678	31,787	29,988	35,057
DIRECTORS OF PERSONNEL II	2,659	3,594	3,522	3,150	3,846	42,845	42,259	37,884	46,132
DIRECTORS OF PERSONNEL III	1,882	4,279	4,201	3,873	4,567	51,296	50,413	46,481	54,804
DIRECTORS OF PERSONNEL IV	398	5,228	5,145	4,748	5,825	62,645	61,975	56,977	67,598
CHEMISTS AND ENGINEERS									
CHEMISTS I	2,653	1,788	1,731	1,543	1,948	21,383	20,777	18,511	23,380
CHEMISTS II	5,255	2,028	1,999	1,816	2,287	24,341	23,990	21,796	26,488
CHEMISTS III	9,197	2,451	2,413	2,183	2,710	29,413	28,962	26,196	32,528
CHEMISTS IV	9,413	2,953	2,932	2,651	3,215	35,439	35,186	31,814	38,585
CHEMISTS V	6,850	3,574	3,515	3,212	3,898	42,892	42,183	38,544	46,660
CHEMISTS VI	2,312	4,252	4,170	3,873	4,570	51,028	50,040	46,481	54,840
CHEMISTS VII	779	5,639	4,785	4,402	5,591	66,471	57,413	52,778	67,092
ENGINEERS I	32,588	2,138	2,139	2,004	2,257	25,554	25,668	24,048	27,084
ENGINEERS II	64,498	2,314	2,300	2,158	2,465	27,769	27,600	25,898	29,580
ENGINEERS III	131,048	2,609	2,599	2,374	2,827	31,307	31,190	28,489	33,924
ENGINEERS IV	138,684	3,061	3,059	2,792	3,315	36,726	36,660	33,504	39,784
ENGINEERS V	99,584	3,643	3,623	3,328	3,939	43,720	43,476	39,934	47,268
ENGINEERS VI	46,426	4,288	4,223	3,861	4,655	51,468	50,680	46,332	55,860
ENGINEERS VII	12,383	4,847	4,734	4,330	5,280	58,167	56,832	52,008	62,400
ENGINEERS VIII	3,125	5,578	5,415	5,081	5,831	66,932	64,974	60,976	69,972

See footnotes at end of table.

Table 1. Continued—Average salaries: United States

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL[2]	NUMBER OF EMPLOYEES[3]	MONTHLY SALARIES[4]				ANNUAL SALARIES[4]			
		MEAN	MEDIAN	MIDDLE RANGE[5]		MEAN	MEDIAN	MIDDLE RANGE[5]	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
TECHNICAL SUPPORT									
ENGINEERING TECHNICIANS I	4,996	1,304	1,283	1,139	1,445	15,646	15,391	13,623	17,340
ENGINEERING TECHNICIANS II	18,416	1,586	1,483	1,350	1,658	18,877	17,796	16,208	19,888
ENGINEERING TECHNICIANS III	31,731	1,788	1,758	1,581	1,969	21,460	21,080	18,968	23,520
ENGINEERING TECHNICIANS IV	15,268	2,088	2,083	1,899	2,253	25,061	25,000	22,791	27,036
ENGINEERING TECHNICIANS V	20,491	2,360	2,361	2,174	2,539	28,328	28,332	26,088	30,470
DRAFTERS I	2,829	1,012	976	889	1,108	12,142	11,718	10,670	13,285
DRAFTERS II	11,234	1,302	1,257	1,125	1,518	15,629	15,079	13,500	18,128
DRAFTERS III	22,217	1,533	1,499	1,333	1,705	18,401	17,991	15,994	20,460
DRAFTERS IV	24,714	1,871	1,833	1,647	2,076	22,454	21,991	19,758	24,906
DRAFTERS V	20,170	2,316	2,266	2,069	2,549	27,795	27,196	24,833	30,588
COMPUTER OPERATORS I	6,803	1,040	1,000	910	1,148	12,481	11,995	10,916	13,680
COMPUTER OPERATORS II	17,903	1,221	1,165	1,052	1,343	14,648	13,980	12,625	16,119
COMPUTER OPERATORS III	29,576	1,416	1,372	1,216	1,566	16,988	16,464	14,594	18,792
COMPUTER OPERATORS IV	15,171	1,727	1,682	1,500	1,933	20,727	20,184	18,000	23,198
COMPUTER OPERATORS V	3,136	2,026	1,966	1,762	2,307	24,307	23,592	21,139	27,688
COMPUTER OPERATORS VI	477	2,188	2,037	1,895	2,261	25,286	24,438	22,746	27,132
PHOTOGRAPHERS II	705	1,703	1,693	1,485	1,897	20,439	20,322	17,820	22,759
PHOTOGRAPHERS III	738	2,035	2,034	1,847	2,253	24,425	24,410	22,162	27,036
PHOTOGRAPHERS IV	397	2,235	2,194	1,932	2,504	26,815	26,324	23,183	30,048
CLERICAL									
ACCOUNTING CLERKS I	26,763	933	879	788	1,012	11,198	10,544	9,359	12,144
ACCOUNTING CLERKS II	87,578	1,122	1,078	959	1,239	13,466	12,937	11,505	14,871
ACCOUNTING CLERKS III	59,324	1,339	1,287	1,128	1,512	16,073	15,443	13,536	18,144
ACCOUNTING CLERKS IV	21,355	1,621	1,584	1,361	1,824	19,455	19,005	16,327	21,890
FILE CLERKS I	19,738	889	775	697	877	9,782	9,300	8,364	10,524
FILE CLERKS II	18,926	911	858	762	975	10,928	10,296	9,143	11,693
FILE CLERKS III	3,457	1,142	1,049	936	1,249	13,699	12,583	11,231	14,991
KEY ENTRY OPERATORS I	52,682	1,049	997	875	1,148	12,583	11,968	10,503	13,779
KEY ENTRY OPERATORS II	32,483	1,255	1,201	1,049	1,484	15,066	14,413	12,548	16,847
MESSENGERS	11,746	918	868	764	998	10,915	10,328	9,172	11,888
PERSONNEL CLERKS/ASSISTANTS I	1,605	1,075	1,062	913	1,178	12,898	12,739	10,936	14,039
PERSONNEL CLERKS/ASSISTANTS II	3,575	1,286	1,284	1,092	1,426	15,428	14,450	13,103	17,117
PERSONNEL CLERKS/ASSISTANTS III	3,234	1,442	1,488	1,262	1,596	17,310	16,899	15,144	19,158
PERSONNEL CLERKS/ASSISTANTS IV	1,528	1,683	1,624	1,458	1,951	20,198	19,486	17,493	23,412
PURCHASING ASSISTANTS I	3,883	1,236	1,175	1,018	1,342	14,827	14,094	12,219	16,104
PURCHASING ASSISTANTS II	3,987	1,567	1,533	1,317	1,795	18,801	18,396	15,807	21,540
PURCHASING ASSISTANTS III	1,185	2,005	2,016	1,735	2,229	24,064	24,192	20,819	26,750
SECRETARIES I	57,779	1,228	1,178	1,018	1,359	14,732	14,048	12,219	16,308
SECRETARIES II	61,183	1,336	1,308	1,165	1,473	16,031	15,600	13,988	17,679
SECRETARIES III	102,687	1,521	1,491	1,300	1,698	18,254	17,887	15,600	20,280
SECRETARIES IV	45,266	1,686	1,666	1,436	1,881	20,232	19,992	17,471	22,566
SECRETARIES V	20,995	1,928	1,906	1,663	2,161	23,137	22,872	19,960	25,932
STENOGRAPHERS I	13,635	1,359	1,335	1,188	1,553	16,387	16,015	13,281	18,642
STENOGRAPHERS II	8,162	1,614	1,621	1,416	1,811	19,367	19,452	16,993	21,734
TYPISTS I	26,832	952	901	802	1,023	11,428	10,815	9,619	12,271
TYPISTS II	13,827	1,257	1,175	994	1,510	15,085	14,094	11,928	18,120

[1] For scope of study, see table A-1 in appendix A.

[2] Occupational definitions appear in appendix C.

[3] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

[4] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[5] The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

Table 2. Average salaries: Metropolitan areas

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,[1] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL [2]	NUMBER OF EMPLOYEES [3]	MONTHLY SALARIES [4]				ANNUAL SALARIES [4]			
		MEAN	MEDIAN	MIDDLE RANGE [5]		MEAN	MEDIAN	MIDDLE RANGE [5]	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
ACCOUNTANTS AND AUDITORS									
ACCOUNTANTS I	13,816	$1,631	$1,628	$1,487	$1,791	$19,573	$19,536	$17,844	$21,491
ACCOUNTANTS II	22,376	1,944	1,908	1,712	2,164	23,332	22,880	20,538	25,732
ACCOUNTANTS III	35,825	2,279	2,249	2,002	2,562	27,344	26,989	24,022	30,828
ACCOUNTANTS IV	20,105	2,855	2,791	2,524	3,149	34,264	33,487	30,288	37,789
ACCOUNTANTS V	6,769	3,492	3,418	3,099	3,798	41,906	41,016	37,185	45,582
ACCOUNTANTS VI	1,349	4,302	4,215	3,823	4,730	51,619	50,580	45,882	57,000
AUDITORS I	1,398	1,556	1,550	1,374	1,749	18,670	18,600	16,493	20,992
AUDITORS II	3,350	1,937	1,938	1,702	2,166	23,241	23,160	20,422	25,998
AUDITORS III	4,447	2,352	2,358	2,083	2,582	28,229	28,292	24,998	30,988
AUDITORS IV	2,315	2,842	2,791	2,499	3,107	34,105	33,487	29,988	37,285
PUBLIC ACCOUNTANTS I	10,687	1,557	1,541	1,498	1,624	18,681	18,493	17,888	19,492
PUBLIC ACCOUNTANTS II	11,877	1,716	1,683	1,599	1,833	20,591	20,190	19,192	21,991
PUBLIC ACCOUNTANTS III	8,687	2,023	1,974	1,828	2,167	24,303	23,691	21,948	26,000
PUBLIC ACCOUNTANTS IV	3,369	2,429	2,374	2,166	2,658	29,143	28,489	25,998	31,888
CHIEF ACCOUNTANTS I	793	2,818	2,843	2,493	3,099	33,811	34,117	29,948	37,185
CHIEF ACCOUNTANTS II	1,053	3,474	3,480	3,161	3,758	41,686	41,888	37,929	45,088
CHIEF ACCOUNTANTS III	666	4,434	4,372	4,082	4,815	53,449	52,464	48,988	57,777
CHIEF ACCOUNTANTS IV	226	5,653	5,595	5,044	6,497	67,834	66,668	60,528	77,969
ATTORNEYS									
ATTORNEYS I	1,236	2,341	2,291	2,027	2,666	28,093	27,489	24,319	31,987
ATTORNEYS II	2,852	2,876	2,880	2,525	3,167	34,510	33,600	30,300	38,000
ATTORNEYS III	3,400	3,521	3,450	3,101	3,850	42,256	41,400	37,214	46,208
ATTORNEYS IV	3,207	4,442	4,407	3,993	4,873	53,301	52,879	47,914	58,477
ATTORNEYS V	1,798	5,448	5,284	4,831	5,998	65,380	63,408	57,977	71,971
ATTORNEYS VI	488	7,085	6,997	6,225	7,925	85,014	83,966	74,700	95,100
BUYERS									
BUYERS I	5,841	1,604	1,550	1,415	1,772	19,243	18,600	16,980	21,266
BUYERS II	15,287	1,980	1,944	1,755	2,154	23,757	23,323	21,060	25,848
BUYERS III	14,611	2,433	2,400	2,178	2,636	29,193	28,800	26,040	31,629
BUYERS IV	5,866	2,968	2,922	2,689	3,278	35,617	35,064	31,307	39,248
PROGRAMMERS/ANALYSTS									
PROGRAMMERS/PROGRAMMER ANALYSTS I	13,492	1,633	1,683	1,488	1,842	19,621	19,239	16,893	22,098
PROGRAMMERS/PROGRAMMER ANALYSTS II	32,535	1,852	1,820	1,624	2,047	22,229	21,838	19,492	24,563
PROGRAMMERS/PROGRAMMER ANALYSTS III	48,494	2,188	2,167	1,958	2,391	26,258	25,998	23,491	28,692
PROGRAMMERS/PROGRAMMER ANALYSTS IV	28,845	2,628	2,620	2,375	2,854	31,532	31,440	28,503	34,245
PROGRAMMERS/PROGRAMMER ANALYSTS V	9,322	3,183	3,158	2,916	3,438	38,198	37,898	34,987	41,188
PERSONNEL MANAGEMENT									
JOB ANALYSTS I	148	1,638	1,541	1,448	1,999	19,894	18,493	17,288	23,998
JOB ANALYSTS II	434	1,837	1,758	1,624	2,069	22,043	21,097	19,492	24,828
JOB ANALYSTS III	785	2,211	2,166	1,995	2,525	26,527	25,990	22,868	30,300
JOB ANALYSTS IV	558	2,755	2,737	2,383	3,012	33,058	32,844	28,598	36,147
DIRECTORS OF PERSONNEL I	1,128	2,739	2,649	2,512	2,916	32,872	31,787	30,139	34,986
DIRECTORS OF PERSONNEL II	2,227	3,487	3,499	3,124	3,817	41,843	41,992	37,485	45,808
DIRECTORS OF PERSONNEL III	1,458	4,261	4,167	3,873	4,542	51,134	50,004	46,481	54,504
DIRECTORS OF PERSONNEL IV	285	5,210	5,165	4,706	5,625	62,517	61,975	56,477	67,500
CHEMISTS AND ENGINEERS									
CHEMISTS I	2,212	1,783	1,739	1,543	1,939	21,481	20,872	18,511	23,169
CHEMISTS II	4,357	2,031	1,998	1,816	2,287	24,368	23,976	21,796	26,489
CHEMISTS III	7,855	2,434	2,408	2,168	2,708	29,203	28,896	26,016	32,488
CHEMISTS IV	7,838	2,951	2,938	2,666	3,213	35,489	35,256	31,987	38,536
CHEMISTS V	5,376	3,566	3,521	3,263	3,866	42,793	42,253	39,156	44,392
CHEMISTS VI	1,744	4,275	4,196	3,873	4,998	51,296	50,356	46,481	55,178
CHEMISTS VII	623	5,114	4,936	4,482	5,700	61,371	59,228	53,778	68,400
ENGINEERS I	29,624	2,120	2,135	2,008	2,249	25,437	25,620	24,081	26,989
ENGINEERS II	58,605	2,306	2,299	2,149	2,456	27,676	27,589	25,798	29,472
ENGINEERS III	119,206	2,610	2,599	2,375	2,825	31,317	31,188	28,500	33,901
ENGINEERS IV	127,662	3,069	3,066	2,800	3,328	36,832	36,787	33,600	39,948
ENGINEERS V	93,869	3,646	3,626	3,332	3,943	43,749	43,507	39,984	47,316
ENGINEERS VI	43,949	4,291	4,229	3,870	4,658	51,487	50,748	46,448	55,896
ENGINEERS VII	11,997	4,849	4,742	4,350	5,209	58,194	56,904	52,200	62,508
ENGINEERS VIII	2,672	5,590	5,425	5,081	5,819	67,083	65,100	60,976	69,779

See footnotes at end of table.

17

Table 2. Continued—Average salaries: Metropolitan areas

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,[1] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL [2]	NUMBER OF EMPLOYEES [3]	MONTHLY SALARIES [4]				ANNUAL SALARIES [4]			
		MEAN	MEDIAN	MIDDLE RANGE [5]		MEAN	MEDIAN	MIDDLE RANGE [5]	
				FIRST QUARTILE	THIRD QUARTILE			FIRST QUARTILE	THIRD QUARTILE
TECHNICAL SUPPORT									
ENGINEERING TECHNICIANS I	4,490	1,317	1,293	1,148	1,474	15,803	15,522	13,774	17,688
ENGINEERING TECHNICIANS II	16,207	1,519	1,491	1,352	1,665	18,224	17,887	16,223	19,988
ENGINEERING TECHNICIANS III	27,406	1,807	1,788	1,595	1,988	21,687	21,368	19,146	23,853
ENGINEERING TECHNICIANS IV	32,879	2,0[illegible]	2,094	1,911	2,295	25,157	25,128	22,938	27,540
ENGINEERING TECHNICIANS V	19,421	2,362	2,367	2,184	2,543	28,344	28,404	26,206	30,514
DRAFTERS I	1,857	1,815	975	985	1,100	12,179	11,695	10,857	13,205
DRAFTERS II	9,588	1,310	1,258	1,130	1,513	15,722	15,100	13,560	18,156
DRAFTERS III	19,218	1,558	1,519	1,369	1,733	18,697	18,228	16,320	20,796
DRAFTERS IV	21,402	1,888	1,847	1,657	2,083	22,597	22,163	19,887	24,996
DRAFTERS V	18,794	2,326	2,266	2,088	2,569	27,915	27,196	24,956	30,828
COMPUTER OPERATORS I	5,322	1,044	1,008	910	1,148	12,533	12,088	10,916	13,668
COMPUTER OPERATORS II	15,875	1,241	1,178	1,078	1,373	14,893	14,140	12,848	16,481
COMPUTER OPERATORS III	27,188	1,426	1,378	1,226	1,573	17,091	16,535	14,715	18,879
COMPUTER OPERATORS IV	14,129	1,733	1,690	1,505	1,937	20,792	20,278	18,068	23,244
COMPUTER OPERATORS V	2,971	2,028	1,964	1,762	2,307	24,333	23,565	21,141	27,688
COMPUTER OPERATORS VI	444	2,893	2,838	2,695	2,298	29,119	24,368	22,741	27,699
PHOTOGRAPHERS II	663	1,698	1,693	1,458	1,897	20,376	20,322	17,493	22,739
PHOTOGRAPHERS III	639	2,061	2,074	1,886	2,267	24,735	24,883	22,632	27,204
PHOTOGRAPHERS IV	361	2,274	2,248	2,040	2,546	27,289	26,976	24,476	30,554
CLERICAL									
ACCOUNTING CLERKS I	24,792	932	876	780	1,017	11,178	10,508	9,361	12,204
ACCOUNTING CLERKS II	79,342	1,128	1,083	953	1,241	13,531	12,995	11,435	14,892
ACCOUNTING CLERKS III	94,598	1,361	1,291	1,130	1,513	16,091	15,495	13,[illegible]	18,154
ACCOUNTING CLERKS IV	19,839	1,621	1,585	1,357	1,823	19,451	19,020	16,284	21,900
FILE CLERKS I	19,887	811	788	700	877	9,736	9,456	8,400	10,529
FILE CLERKS II	9,861	917	838	771	975	11,005	10,[illegible]	9,252	11,695
FILE CLERKS III	3,339	1,141	1,049	935	1,249	13,687	12,585	11,224	14,991
KEY ENTRY OPERATORS I	48,489	1,054	1,004	879	1,157	12,645	12,046	10,548	13,883
KEY ENTRY OPERATORS II	38,503	1,262	1,203	1,054	1,404	15,139	14,448	12,[illegible]	16,853
MESSENGERS	11,253	913	866	763	991	10,952	10,396	9,156	11,899
PERSONNEL CLERKS/ASSISTANTS I	1,488	1,067	1,039	913	1,166	12,804	12,468	10,956	13,994
PERSONNEL CLERKS/ASSISTANTS II	2,976	1,384	1,213	1,116	1,642	15,646	14,559	13,[illegible]	17,384
PERSONNEL CLERKS/ASSISTANTS III	2,785	1,644	1,488	1,262	1,596	17,329	16,899	15,144	19,158
PERSONNEL CLERKS/ASSISTANTS IV	1,312	1,691	1,633	1,458	1,989	20,292	19,591	17,493	23,868
PURCHASING ASSISTANTS I	3,428	1,254	1,193	1,031	1,374	15,058	14,348	12,375	16,493
PURCHASING ASSISTANTS II	3,669	1,586	1,568	1,333	1,817	19,035	18,719	15,996	21,804
PURCHASING ASSISTANTS III	1,167	2,011	2,016	1,745	2,241	24,134	24,192	20,944	26,889
SECRETARIES I	54,661	1,230	1,178	1,018	1,368	14,762	14,134	12,217	16,379
SECRETARIES II	57,079	1,336	1,302	1,166	1,474	16,031	15,661	13,994	17,693
SECRETARIES III	96,842	1,525	1,492	1,308	1,788	18,295	17,899	15,688	20,488
SECRETARIES IV	43,082	1,692	1,674	1,462	1,898	20,305	20,038	17,544	22,668
SECRETARIES V	28,172	1,931	1,918	1,664	2,166	23,175	22,920	19,968	25,994
STENOGRAPHERS I	12,538	1,360	1,341	1,895	1,363	16,315	16,098	13,140	16,784
STENOGRAPHERS II	7,753	1,628	1,624	1,443	1,801	19,445	19,493	17,316	21,614
TYPISTS I	29,132	949	900	799	1,010	11,383	10,796	9,593	12,120
TYPISTS II	13,484	1,298	1,175	994	1,510	15,898	14,100	11,922	18,120

[1] For scope of study, see table A-1 in appendix A.

[2] Occupational definitions appear in appendix C.

[3] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

[4] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Non-production bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[5] The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

Table 3. Average salaries: Establishments employing 2,500 workers or more

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] in establishments employing 2,500 workers or more,[2] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL [3]	NUMBER OF EMPLOYEES [4]	MONTHLY SALARIES [5]				LEVELS IN ESTABLISHMENTS EMPLOYING 2,500 WORKERS OR MORE EXPRESSED AS PERCENT OF THOSE IN ALL ESTABLISHMENTS COMBINED	
		MEAN	MEDIAN	MIDDLE RANGE [6]		EMPLOYMENT	MEAN SALARIES
				FIRST QUARTILE	THIRD QUARTILE		
ACCOUNTANTS AND AUDITORS							
ACCOUNTANTS I	3,277	$1,673	$1,649	$1,339	$1,888	23	103
ACCOUNTANTS II	7,614	2,119	2,083	1,866	2,381	31	109
ACCOUNTANTS III	9,496	2,603	2,575	2,102	2,711	25	105
ACCOUNTANTS IV	6,418	2,912	2,898	2,369	3,287	29	102
ACCOUNTANTS V	2,388	3,541	3,480	3,128	3,885	33	101
ACCOUNTANTS VI	796	4,324	4,207	3,832	4,729	36	100
AUDITORS I	484	1,391	1,359	1,188	1,749	31	102
AUDITORS II	1,240	1,996	1,962	1,749	2,231	35	103
AUDITORS III	1,748	2,438	2,387	2,093	2,716	37	103
AUDITORS IV	939	2,955	2,922	2,588	3,239	39	104
CHIEF ACCOUNTANTS III	84	4,388	4,216	4,088	4,773	11	99
CHIEF ACCOUNTANTS IV	99	5,311	5,585	4,982	6,088	39	97
ATTORNEYS							
ATTORNEYS I	438	2,639	2,617	2,388	2,999	33	113
ATTORNEYS II	813	3,184	3,083	2,774	3,638	28	109
ATTORNEYS III	1,266	3,641	3,582	3,217	3,998	36	103
ATTORNEYS IV	1,156	4,528	4,475	3,984	4,998	39	102
ATTORNEYS V	829	5,344	5,415	4,814	6,167	48	101
ATTORNEYS VI	249	7,301	7,167	6,414	8,114	38	103
BUYERS							
BUYERS I	1,313	1,782	1,733	1,582	1,988	29	112
BUYERS II	5,209	2,085	2,039	1,834	2,263	23	104
BUYERS III	6,108	2,476	2,416	2,165	2,734	38	102
BUYERS IV	3,247	2,930	2,873	2,535	3,225	61	99
PROGRAMMERS/ANALYSTS							
PROGRAMMERS/PROGRAMMER ANALYSTS I	3,136	1,703	1,764	1,398	1,999	33	108
PROGRAMMERS/PROGRAMMER ANALYSTS II	11,194	1,970	1,933	1,749	2,174	32	107
PROGRAMMERS/PROGRAMMER ANALYSTS III	10,291	2,287	2,250	2,082	2,498	36	105
PROGRAMMERS/PROGRAMMER ANALYSTS IV	13,752	2,708	2,695	2,483	2,919	47	103
PROGRAMMERS/PROGRAMMER ANALYSTS V	6,350	3,256	3,288	2,991	3,487	66	103
PERSONNEL MANAGEMENT							
JOB ANALYSTS II	192	1,844	1,832	1,644	2,046	43	102
JOB ANALYSTS III	388	2,330	2,275	1,963	2,634	39	106
JOB ANALYSTS IV	358	2,851	2,858	2,538	3,133	69	105
DIRECTORS OF PERSONNEL III	124	4,538	4,515	4,025	4,813	11	104
DIRECTORS OF PERSONNEL IV	134	5,489	5,334	5,012	5,714	44	104
CHEMISTS AND ENGINEERS							
CHEMISTS I	932	1,924	1,938	1,727	2,125	29	108
CHEMISTS II	1,574	2,191	2,187	1,987	2,404	38	108
CHEMISTS III	2,533	2,686	2,646	2,328	3,028	28	110
CHEMISTS IV	2,027	3,171	3,095	2,889	3,448	38	107
CHEMISTS V	2,259	3,741	3,628	3,248	4,088	33	104
CHEMISTS VI	837	4,266	4,118	3,678	4,758	36	100
CHEMISTS VII	387	5,121	4,845	4,313	5,888	59	102
ENGINEERS I	16,571	2,170	2,167	2,038	2,285	31	102
ENGINEERS II	29,648	2,397	2,368	2,201	2,491	46	102
ENGINEERS III	61,892	2,669	2,662	2,457	2,871	47	102
ENGINEERS IV	79,821	3,118	3,128	2,868	3,358	51	102
ENGINEERS V	38,919	3,681	3,665	3,375	3,969	56	101
ENGINEERS VI	26,728	4,330	4,268	3,878	4,788	62	101
ENGINEERS VII	7,196	4,868	4,748	4,355	5,243	58	100
ENGINEERS VIII	1,679	5,648	5,423	5,041	5,998	54	101

See footnotes at end of table.

Table 3. Continued—Average salaries: Establishments employing 2,500 workers or more

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] in establishments employing 2,500 workers or more,[2] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL [3]	NUMBER OF EMPLOYEES [4]	MONTHLY SALARIES [5]				LEVELS IN ESTABLISHMENTS EMPLOYING 2,500 WORKERS OR MORE EXPRESSED AS PERCENT OF THOSE IN ALL ESTABLISHMENTS COMBINED	
		MEAN	MEDIAN	MIDDLE RANGE [6]			
				FIRST QUARTILE	THIRD QUARTILE	EMPLOYMENT	MEAN SALARIES
TECHNICAL SUPPORT							
ENGINEERING TECHNICIANS I	1,173	1,354	1,388	1,162	1,546	23	104
ENGINEERING TECHNICIANS II	6,814	1,580	1,565	1,387	1,759	37	103
ENGINEERING TECHNICIANS III	13,045	1,832	1,811	1,619	2,045	41	102
ENGINEERING TECHNICIANS IV	10,379	2,110	2,113	1,928	2,296	52	101
ENGINEERING TECHNICIANS V	13,029	2,373	2,366	2,182	2,563	64	101
DRAFTERS I	384	1,103	1,088	944	1,241	15	109
DRAFTERS II	2,818	1,428	1,495	1,218	1,631	23	110
DRAFTERS III	5,468	1,643	1,617	1,410	1,883	25	107
DRAFTERS IV	7,731	1,952	1,927	1,738	2,151	31	104
DRAFTERS V	6,808	2,379	2,388	2,138	2,615	44	103
COMPUTER OPERATORS I	1,616	1,366	1,094	973	1,288	27	110
COMPUTER OPERATORS II	4,318	1,462	1,513	1,211	1,681	24	120
COMPUTER OPERATORS III	7,586	1,597	1,566	1,355	1,777	26	113
COMPUTER OPERATORS IV	9,758	1,872	1,855	1,625	2,065	38	108
COMPUTER OPERATORS V	1,666	2,157	2,167	1,874	2,344	53	106
COMPUTER OPERATORS VI	359	2,107	2,108	1,913	2,296	75	108
PHOTOGRAPHERS II	206	1,834	1,825	1,568	2,023	29	108
PHOTOGRAPHERS III	353	2,056	2,077	1,842	2,267	48	101
PHOTOGRAPHERS IV	302	2,176	2,145	1,838	2,482	76	97
CLERICAL							
ACCOUNTING CLERKS I	3,552	1,176	1,103	895	1,497	13	126
ACCOUNTING CLERKS II	15,854	1,310	1,248	1,073	1,569	17	117
ACCOUNTING CLERKS III	15,358	1,489	1,499	1,250	1,681	26	111
ACCOUNTING CLERKS IV	8,297	1,768	1,731	1,525	2,031	39	109
FILE CLERKS II	1,963	1,033	969	816	1,203	18	113
FILE CLERKS III	835	1,292	1,193	958	1,528	24	110
KEY ENTRY OPERATORS I	10,452	1,250	1,200	997	1,499	28	119
KEY ENTRY OPERATORS II	9,337	1,428	1,348	1,140	1,631	29	115
MESSENGERS	3,011	1,027	953	828	1,173	26	113
PERSONNEL CLERKS/ASSISTANTS I	231	1,137	1,106	950	1,213	14	106
PERSONNEL CLERKS/ASSISTANTS II	627	1,470	1,435	1,205	1,700	18	114
PERSONNEL CLERKS/ASSISTANTS III	598	1,587	1,588	1,374	1,820	18	110
PERSONNEL CLERKS/ASSISTANTS IV	413	1,957	1,994	1,809	2,083	27	116
PURCHASING ASSISTANTS I	775	1,531	1,419	1,222	1,833	20	124
PURCHASING ASSISTANTS II	1,463	1,763	1,811	1,521	2,001	37	113
PURCHASING ASSISTANTS III	972	2,083	2,079	1,913	2,269	82	104
SECRETARIES I	16,432	1,414	1,315	1,136	1,633	28	115
SECRETARIES II	28,567	1,415	1,388	1,230	1,564	34	106
SECRETARIES III	37,810	1,637	1,633	1,417	1,872	37	109
SECRETARIES IV	16,159	1,812	1,810	1,589	2,011	36	107
SECRETARIES V	7,235	2,108	2,102	1,855	2,331	34	109
STENOGRAPHERS I	7,894	1,401	1,419	1,122	1,595	58	103
STENOGRAPHERS II	5,258	1,632	1,642	1,449	1,799	64	101
TYPISTS I	5,747	1,083	992	871	1,205	21	114
TYPISTS II	5,847	1,358	1,355	1,068	1,598	42	108

[1] For scope of study, see table A-1 in appendix A.

[2] Includes data from some large companies that provide companywide data not identified by size of establishment.

[3] Occupational definitions appear in appendix C.

[4] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not the number actually surveyed. For further explanation, see appendix A.

[5] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[6] The middle range (interquartile) is the central part of the array exluding the upper and lower fourths of the employee distribution.

Table 4. Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	ACCOUNTANTS						CHIEF ACCOUNTANTS			
	I	II	III	IV	V	VI	I	II	III	IV
$1,800 AND UNDER $1,850	-	-	-	-	-	-	-	-	-	-
$1,850 AND UNDER $1,100	(1.7)	-	-	-	-	-	-	-	-	-
$1,100 AND UNDER $1,150	1.1	-	-	-	-	-	-	-	-	-
$1,150 AND UNDER $1,200	1.8	-	-	-	-	-	-	-	-	-
$1,200 AND UNDER $1,250	2.8	-	-	-	-	-	-	-	-	-
$1,250 AND UNDER $1,300	2.8	-	-	-	-	-	-	-	-	-
$1,300 AND UNDER $1,350	3.9	-	-	-	-	-	-	-	-	-
$1,350 AND UNDER $1,400	2.5	(2.9)	-	-	-	-	-	-	-	-
$1,400 AND UNDER $1,450	5.2	1.9	-	-	-	-	-	-	-	-
$1,450 AND UNDER $1,500	6.8	2.1	-	-	-	-	-	-	-	-
$1,500 AND UNDER $1,550	8.6	3.2	-	-	-	-	-	-	-	-
$1,550 AND UNDER $1,600	6.8	3.1	-	-	-	-	-	-	-	-
$1,600 AND UNDER $1,650	9.4	5.6	(2.6)	-	-	-	-	-	-	-
$1,650 AND UNDER $1,700	9.3	5.8	2.1	-	-	-	-	-	-	-
$1,700 AND UNDER $1,750	7.6	6.0	2.2	-	-	-	-	-	-	-
$1,750 AND UNDER $1,800	6.7	6.2	2.2	-	-	-	-	-	-	-
$1,800 AND UNDER $1,850	7.4	5.9	3.0	-	-	-	-	-	-	-
$1,850 AND UNDER $1,900	4.3	8.7	3.5	-	-	-	-	-	-	-
$1,900 AND UNDER $1,950	2.5	4.3	4.4	-	-	-	-	-	-	-
$1,950 AND UNDER $2,000	2.8	5.4	4.0	-	-	-	3.2	-	-	-
$2,000 AND UNDER $2,050	1.7	5.5	5.4	(2.2)	-	-	-	-	-	-
$2,050 AND UNDER $2,100	1.7	4.7	6.0	1.5	-	-	-	-	-	-
$2,100 AND UNDER $2,150	1.8	5.0	4.5	1.2	-	-	1.3	-	-	-
$2,150 AND UNDER $2,200	(2.6)	5.5	5.3	1.5	-	-	3.2	-	-	-
$2,200 AND UNDER $2,250	-	5.2	5.5	2.0	-	-	3.2	2.1	-	-
$2,250 AND UNDER $2,300	-	2.7	5.0	2.1	-	-	-	-	-	-
$2,300 AND UNDER $2,350	-	2.7	4.8	2.1	-	-	-	-	-	-
$2,350 AND UNDER $2,400	-	2.1	4.8	2.2	-	-	9.3	-	-	-
$2,400 AND UNDER $2,450	-	1.8	4.0	3.5	-	-	-	-	-	-
$2,450 AND UNDER $2,500	-	2.9	4.6	4.2	(1.2)	-	7.0	-	-	-
$2,500 AND UNDER $2,600	-	2.4	4.6	10.1	2.0	-	10.6	-	-	-
$2,600 AND UNDER $2,700	-	1.2	5.0	9.7	1.6	-	2.2	.2	-	-
$2,700 AND UNDER $2,800	-	(2.1)	4.7	9.0	3.2	-	7.4	3.0	-	-
$2,800 AND UNDER $2,900	-	-	3.6	7.3	2.5	-	10.6	2.7	-	-
$2,900 AND UNDER $3,000	-	-	2.3	7.7	7.0	(2.0)	8.1	8.3	-	-
$3,000 AND UNDER $3,100	-	-	1.4	5.9	6.7	2.7	9.6	5.1	-	-
$3,100 AND UNDER $3,200	-	-	1.0	5.6	6.6	.8	4.8	9.2	-	-
$3,200 AND UNDER $3,300	-	-	(1.3)	5.6	6.2	.9	4.1	10.1	3.8	-
$3,300 AND UNDER $3,400	-	-	-	4.8	9.8	2.2	8.9	5.9	1.8	-
$3,400 AND UNDER $3,500	-	-	-	3.0	8.9	5.6	-	6.6	.3	-
$3,500 AND UNDER $3,600	-	-	-	1.9	6.7	1.8	4.8	4.6	.9	-
$3,600 AND UNDER $3,700	-	-	-	2.6	6.4	4.2	-	6.2	.7	-
$3,700 AND UNDER $3,800	-	-	-	2.4	5.6	4.6	-	13.2	2.8	-
$3,800 AND UNDER $3,900	-	-	-	1.1	5.1	6.5	-	6.2	2.7	-
$3,900 AND UNDER $4,000	-	-	-	(2.6)	3.7	6.1	-	5.4	6.2	-
$4,000 AND UNDER $4,100	-	-	-	-	4.1	4.3	-	1.6	10.1	-
$4,100 AND UNDER $4,200	-	-	-	-	2.4	6.3	-	2.7	10.5	-
$4,200 AND UNDER $4,300	-	-	-	-	2.1	4.8	-	.9	5.4	(1.3)
$4,300 AND UNDER $4,400	-	-	-	-	1.2	4.8	-	2.1	6.2	4.1
$4,400 AND UNDER $4,500	-	-	-	-	2.2	10.3	-	.8	3.8	1.2
$4,500 AND UNDER $4,600	-	-	-	-	1.8	3.8	-	.8	11.7	4.1
$4,600 AND UNDER $4,700	-	-	-	-	(3.4)	3.8	-	.2	4.8	.8
$4,700 AND UNDER $4,800	-	-	-	-	-	3.6	-	-	3.8	4.1
$4,800 AND UNDER $4,900	-	-	-	-	-	4.7	-	-	2.6	2.8
$4,900 AND UNDER $5,000	-	-	-	-	-	4.4	-	-	2.7	6.1
$5,000 AND UNDER $5,100	-	-	-	-	-	2.2	-	-	11.5	3.3
$5,100 AND UNDER $5,200	-	-	-	-	-	1.9	-	-	.3	8.9
$5,200 AND UNDER $5,300	-	-	-	-	-	1.5	-	-	1.6	6.1
$5,300 AND UNDER $5,400	-	-	-	-	-	3.1	-	-	.3	2.4
$5,400 AND UNDER $5,500	-	-	-	-	-	1.8	-	-	-	8.9
$5,500 AND UNDER $5,600	-	-	-	-	-	(4.9)	-	-	-	14.2
$5,600 AND UNDER $5,700	-	-	-	-	-	-	-	-	3.1	.4
$5,700 AND UNDER $5,800	-	-	-	-	-	-	-	-	.3	1.2
$5,800 AND UNDER $5,900	-	-	-	-	-	-	-	-	2.3	6.1
$5,900 AND UNDER $6,000	-	-	-	-	-	-	-	-	-	1.6
$6,000 AND UNDER $6,100	-	-	-	-	-	-	-	1.3	-	2.4
$6,100 AND UNDER $6,200	-	-	-	-	-	-	-	-	-	.4
$6,200 AND UNDER $6,300	-	-	-	-	-	-	-	-	-	1.2
$6,300 AND UNDER $6,400	-	-	-	-	-	-	-	-	-	-
$6,400 AND UNDER $6,500	-	-	-	-	-	-	-	-	-	4.1
$6,500 AND UNDER $6,600	-	-	-	-	-	-	-	-	-	-
$6,600 AND UNDER $6,700	-	-	-	-	-	-	-	-	1.1	.4
$6,700 AND UNDER $6,800	-	-	-	-	-	-	-	-	-	2.8
$6,800 AND UNDER $6,900	-	-	-	-	-	-	-	-	-	16.3
$7,000 AND UNDER $7,100	-	-	-	-	-	-	-	-	-	1.2
$7,100 AND UNDER $7,200	-	-	-	-	-	-	-	-	-	-
$7,400 AND UNDER $7,500	-	-	-	-	-	-	-	-	-	(1.2)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	14446.0	24627.0	38498.0	22037.0	7319.0	1423.0	897.0	1195.0	741.0	246.0
AVERAGE MONTHLY SALARY	$1626.6	$1938.7	$2278.9	$2853.6	$3488.5	$4316.5	$2886.9	$3672.0	$4448.5	$5659.9

See footnotes at end of table.

Table 4. Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii, March 1983)

MONTHLY SALARY	AUDITORS				PUBLIC ACCOUNTANTS			
	I	II	III	IV	I	II	III	IV
$1,000 AND UNDER $1,050	-	-	-	-	-	-	-	-
$1,050 AND UNDER $1,100	-	-	-	-	-	-	-	-
$1,100 AND UNDER $1,150	(1.7)	-	-	-	-	-	-	-
$1,150 AND UNDER $1,200	2.3	-	-	-	-	-	-	-
$1,200 AND UNDER $1,250	3.6	-	-	-	-	-	-	-
$1,250 AND UNDER $1,300	6.0	(1.2)	-	-	(2.0)	-	-	-
$1,300 AND UNDER $1,350	7.8	1.8	-	-	3.7	(1.0)	-	-
$1,350 AND UNDER $1,400	9.7	2.5	-	-	5.9	1.1	-	-
$1,400 AND UNDER $1,450	6.3	2.8	-	-	9.6	3.0	-	-
$1,450 AND UNDER $1,500	5.0	3.8	(0.4)	-	14.8	5.7	-	-
$1,500 AND UNDER $1,550	6.8	2.5	1.1	-	24.1	5.8	(0.9)	-
$1,550 AND UNDER $1,600	9.8	3.5	1.0	-	11.5	9.2	2.7	-
$1,600 AND UNDER $1,650	5.9	3.1	.9	-	7.2	18.2	3.5	-
$1,650 AND UNDER $1,700	5.8	3.5	1.2	-	6.6	9.8	3.5	-
$1,700 AND UNDER $1,750	8.7	5.3	1.4	-	7.3	9.2	6.4	-
$1,750 AND UNDER $1,800	4.3	5.1	1.7	-	3.8	6.6	5.3	(1.5)
$1,800 AND UNDER $1,850	4.3	5.6	2.9	-	3.2	7.7	8.9	1.1
$1,850 AND UNDER $1,900	4.4	5.6	3.3	-	1.3	5.7	6.1	1.2
$1,900 AND UNDER $1,950	1.8	5.9	2.7	-	(1.3)	5.5	8.6	2.2
$1,950 AND UNDER $2,000	1.4	9.2	2.6	-	.4	4.5	7.9	5.6
$2,000 AND UNDER $2,050	2.2	5.5	2.8	-	.1	2.8	6.7	2.3
$2,050 AND UNDER $2,100	(3.0)	3.9	4..	(2.1)	.8	1.9	7.1	4.6
$2,100 AND UNDER $2,150	-	4.3	3.8	1.6	.8	1.1	4.9	4.7
$2,150 AND UNDER $2,200	-	3.9	3.6	.9	.8	(2.2)	5.2	3.7
$2,200 AND UNDER $2,250	-	4.4	7.8	1.4	-	.6	4.6	4.7
$2,250 AND UNDER $2,300	-	3.6	4.5	1.9	-	.6	2.9	7.1
$2,300 AND UNDER $2,350	-	2.1	5.8	5.9	-	.1	2.5	6.6
$2,350 AND UNDER $2,400	-	1.7	3.5	1.6	-	.1	1.6	6.2
$2,400 AND UNDER $2,450	-	3.1	6.2	3.6	-	.0	1.4	6.8
$2,450 AND UNDER $2,500	-	2.2	5.8	5.2	-	-	2.4	5.6
$2,500 AND UNDER $2,600	-	2.3	11.0	9.6	-	.0	2.3	6.8
$2,600 AND UNDER $2,700	-	1.4	6.5	8.6	-	-	1.3	5.4
$2,700 AND UNDER $2,800	-	(1.5)	6.8	8.1	-	-	1.9	5.8
$2,800 AND UNDER $2,900	-	-	5.9	7.8	-	-	(2.0)	4.8
$2,900 AND UNDER $3,000	-	-	1.8	9.8	-	-	.3	5.4
$3,000 AND UNDER $3,100	-	-	1.2	6.1	-	-	.2	2.1
$3,100 AND UNDER $3,200	-	-	(3.9)	7.4	-	-	.1	1.5
$3,200 AND UNDER $3,300	-	-	.9	3.2	-	-	.3	1.1
$3,300 AND UNDER $3,400	-	-	.5	2.3	-	-	.2	(2.0)
$3,400 AND UNDER $3,500	-	-	.7	3.2	-	-	.1	-
$3,500 AND UNDER $3,600	-	-	-	1.9	-	-	.1	-
$3,600 AND UNDER $3,700	-	-	-	2.4	-	-	-	-
$3,700 AND UNDER $3,800	-	-	-	1.1	-	-	-	-
$3,800 AND UNDER $3,900	-	-	-	.9	-	-	-	-
$3,900 AND UNDER $4,000	-	-	-	.5	-	-	-	-
$4,000 AND UNDER $4,100	-	-	-	1.5	-	-	-	-
$4,100 AND UNDER $4,200	-	-	-	(1.1)	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	1578.0	3530.0	4762.0	2431.0	10884.0	11168.0	8698.0	5395.0
AVERAGE MONTHLY SALARY	$1560.3	$1941.1	$2353.8	$2840.9	$1535.7	$1714.4	$2023.2	$2427.8

See footnotes at end of table.

22

Table 4. Continued—Employment distribution by salary: Professional and adminstrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1983)

MONTHLY SALARY	JOB ANALYSTS				DIRECTORS OF PERSONNEL			
	I	II	III	IV	I	II	III	IV
$1,100 AND UNDER $1,150	3.7	-	-	-	-	-	-	-
$1,150 AND UNDER $1,200	7.9	-	1.6	-	-	-	-	-
$1,200 AND UNDER $1,250	.7	1.4	-	-	-	-	-	-
$1,250 AND UNDER $1,300	2.9	1.8	-	-	-	-	-	-
$1,300 AND UNDER $1,350	2.1	1.8	-	-	-	-	-	-
$1,350 AND UNDER $1,400	12.1	5.0	2.6	-	-	-	-	-
$1,400 AND UNDER $1,450	10.0	2.7	1.2	-	-	-	-	-
$1,450 AND UNDER $1,500	12.9	3.4	-	-	-	-	-	-
$1,500 AND UNDER $1,550	10.7	6.8	.6	-	-	-	-	-
$1,550 AND UNDER $1,600	.7	5.9	1.2	-	-	-	-	-
$1,600 AND UNDER $1,650	1.4	14.0	1.3	-	-	-	-	-
$1,650 AND UNDER $1,700	5.7	7.7	1.1	-	-	-	-	-
$1,700 AND UNDER $1,750	-	2.5	5.9	(0.9)	1.1	-	-	-
$1,750 AND UNDER $1,800	.7	8.8	3.0	1.1	3.2	-	-	-
$1,800 AND UNDER $1,850	-	2.3	5.3	-	-	-	-	-
$1,850 AND UNDER $1,900	-	7.2	8.6	.2	-	-	-	-
$1,900 AND UNDER $1,950	6.4	2.0	5.0	.7	2.4	-	-	-
$1,950 AND UNDER $2,000	.7	6.3	4.1	.2	.8	-	-	-
$2,000 AND UNDER $2,050	2.9	3.2	8.1	2.3	1.8	-	-	-
$2,050 AND UNDER $2,100	.7	.5	3.8	.7	1.7	-	-	-
$2,100 AND UNDER $2,150	-	.7	2.9	.7	-	-	-	-
$2,150 AND UNDER $2,200	2.9	3.2	6.0	2.3	2.8	-	-	-
$2,200 AND UNDER $2,250	2.1	.5	2.7	3.6	1.9	-	-	-
$2,250 AND UNDER $2,300	2.9	2.3	6.8	10.2	1.7	-	-	-
$2,300 AND UNDER $2,350	2.9	4.5	2.0	3.7	-	-	-	-
$2,350 AND UNDER $2,400	4.3	.5	2.6	2.8	3.3	-	-	-
$2,400 AND UNDER $2,450	(0.7)	.7	1.6	2.5	4.8	(2.5)	-	-
$2,450 AND UNDER $2,500	-	3.8	4.1	8.4	16.7	1.7	-	-
$2,500 AND UNDER $2,600	-	(0.9)	6.7	5.2	16.5	2.2	-	-
$2,600 AND UNDER $2,700	-	-	2.7	10.3	6.8	1.3	-	-
$2,700 AND UNDER $2,800	-	-	2.9	11.9	7.2	3.2	-	-
$2,800 AND UNDER $2,900	-	-	1.3	7.1	6.9	7.2	-	-
$2,900 AND UNDER $3,000	-	-	1.7	3.7	6.7	4.5	-	-
$3,000 AND UNDER $3,100	-	-	2.5	5.8	1.5	6.6	-	-
$3,100 AND UNDER $3,200	-	-	(1.5)	3.7	2.5	3.6	(1.1)	-
$3,200 AND UNDER $3,300	-	-	-	2.8	.9	8.2	2.6	-
$3,300 AND UNDER $3,400	-	-	-	1.6	1.3	8.5	2.3	-
$3,400 AND UNDER $3,500	-	-	-	2.7	-	9.9	3.4	-
$3,500 AND UNDER $3,600	-	-	-	.4	1.7	5.8	5.9	-
$3,600 AND UNDER $3,700	-	-	-	2.3	2.6	7.6	8.2	-
$3,700 AND UNDER $3,800	-	-	-	(2.7)	3.1	6.9	3.6	-
$3,800 AND UNDER $3,900	-	-	-	-	(0.9)	4.6	5.6	(0.3)
$3,900 AND UNDER $4,000	-	-	-	-	-	4.9	3.6	4.2
$4,000 AND UNDER $4,100	-	-	-	-	-	2.9	10.7	2.8
$4,100 AND UNDER $4,200	-	-	-	-	-	3.6	4.9	-
$4,200 AND UNDER $4,300	-	-	-	-	-	.8	8.6	4.9
$4,300 AND UNDER $4,400	-	-	-	-	-	1.4	8.5	.8
$4,400 AND UNDER $4,500	-	-	-	-	-	.9	7.2	9.1
$4,500 AND UNDER $4,600	-	-	-	-	-	.1	5.8	1.9
$4,600 AND UNDER $4,700	-	-	-	-	-	.1	2.8	3.6
$4,700 AND UNDER $4,800	-	-	-	-	-	.2	3.3	2.9
$4,800 AND UNDER $4,900	-	-	-	-	-	-	1.1	10.1
$4,900 AND UNDER $5,000	-	-	-	-	-	.2	1.1	4.9
$5,000 AND UNDER $5,100	-	-	-	-	-	1.3	-	5.2
$5,100 AND UNDER $5,200	-	-	-	-	-	(0.3)	.4	8.1
$5,200 AND UNDER $5,300	-	-	-	-	-	-	1.1	9.1
$5,300 AND UNDER $5,400	-	-	-	-	-	-	(1.9)	4.2
$5,400 AND UNDER $5,500	-	-	-	-	-	-	-	-
$5,500 AND UNDER $5,600	-	-	-	-	-	-	-	5.8
$5,600 AND UNDER $5,700	-	-	-	-	-	-	-	2.6
$5,700 AND UNDER $5,800	-	-	-	-	-	-	-	4.9
$5,800 AND UNDER $5,900	-	-	-	-	-	-	-	.3
$5,900 AND UNDER $6,000	-	-	-	-	-	-	-	1.9
$6,000 AND UNDER $6,100	-	-	-	-	-	-	-	1.3
$6,100 AND UNDER $6,200	-	-	-	-	-	-	-	2.9
$6,200 AND UNDER $6,300	-	-	-	-	-	-	-	1.9
$6,300 AND UNDER $6,400	-	-	-	-	-	-	-	1.9
$6,400 AND UNDER $6,500	-	-	-	-	-	-	-	1.6
$6,500 AND UNDER $6,600	-	-	-	-	-	-	-	-
$6,600 AND UNDER $6,700	-	-	-	-	-	-	-	1.3
$6,700 AND UNDER $6,800	-	-	-	-	-	-	-	2.2
$6,800 AND UNDER $6,900	-	-	-	-	-	-	-	(0.6)
$6,900 AND UNDER $7,000	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	140.0	443.0	837.0	561.0	1528.0	2659.0	1982.9	378.0
AVERAGE MONTHLY SALARY	$1637.8	$1832.7	$2202.2	$2757.0	$2723.2	$3503.7	$4274.7	$5220.4

See footnotes at end of table.

Table 4. Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1982)

MONTHLY SALARY	ATTORNEYS					
	I	II	III	IV	V	VI
$1,350 AND UNDER $1,400	1.6	-	-	-	-	-
$1,450 AND UNDER $1,500	1.9	-	-	-	-	-
$1,500 AND UNDER $1,550	1.9	-	-	-	-	-
$1,600 AND UNDER $1,650	.1	-	-	-	-	-
$1,650 AND UNDER $1,700	6.4	-	-	-	-	-
$1,700 AND UNDER $1,750	.2	-	-	-	-	-
$1,750 AND UNDER $1,800	.3	-	-	-	-	-
$1,800 AND UNDER $1,850	2.9	-	-	-	-	-
$1,850 AND UNDER $1,900	3.2	-	-	-	-	-
$1,900 AND UNDER $1,950	.8	-	-	-	-	-
$1,950 AND UNDER $2,000	3.8	-	-	-	-	-
$2,000 AND UNDER $2,050	5.8	(1.6)	-	-	-	-
$2,050 AND UNDER $2,100	6.5	2.1	-	-	-	-
$2,100 AND UNDER $2,150	4.6	1.1	-	-	-	-
$2,150 AND UNDER $2,200	4.4	2.9	-	-	-	-
$2,200 AND UNDER $2,250	5.8	-	-	-	-	-
$2,250 AND UNDER $2,300	4.8	2.4	-	-	-	-
$2,300 AND UNDER $2,350	2.5	2.3	-	-	-	-
$2,350 AND UNDER $2,400	3.7	4.6	-	-	-	-
$2,400 AND UNDER $2,450	4.4	1.9	(1.4)	-	-	-
$2,450 AND UNDER $2,500	2.3	2.5	-	-	-	-
$2,500 AND UNDER $2,600	4.4	8.5	2.1	-	-	-
$2,600 AND UNDER $2,700	3.8	6.9	1.1	-	-	-
$2,700 AND UNDER $2,800	4.3	11.9	4.4	-	-	-
$2,800 AND UNDER $2,900	3.7	8.4	2.4	-	-	-
$2,900 AND UNDER $3,000	3.1	8.9	6.8	-	-	-
$3,000 AND UNDER $3,100	4.4	4.4	6.8	(1.2)	-	-
$3,100 AND UNDER $3,200	1.8	4.8	5.7	1.9	-	-
$3,200 AND UNDER $3,300	1.4	3.8	3.3	1.6	-	-
$3,300 AND UNDER $3,400	1.4	4.4	12.8	1.7	-	-
$3,400 AND UNDER $3,500	1.8	2.8	6.8	1.6	-	-
$3,500 AND UNDER $3,600	(1.2)	3.8	4.1	2.3	-	-
$3,600 AND UNDER $3,700	-	2.4	8.2	3.2	-	-
$3,700 AND UNDER $3,800	-	2.3	7.4	4.3	-	-
$3,800 AND UNDER $3,900	-	1.9	4.8	2.7	-	-
$3,900 AND UNDER $4,000	-	(3.0)	3.3	3.1	-	-
$4,000 AND UNDER $4,100	-	-	4.6	7.8	(1.8)	-
$4,100 AND UNDER $4,200	-	-	1.9	4.3	2.3	-
$4,200 AND UNDER $4,300	-	-	2.7	4.9	1.9	-
$4,300 AND UNDER $4,400	-	-	1.1	3.8	1.2	-
$4,400 AND UNDER $4,500	-	-	2.8	3.7	3.9	-
$4,500 AND UNDER $4,600	-	-	.9	7.8	3.1	5.8
$4,600 AND UNDER $4,700	-	-	1.8	3.8	3.1	1.8
$4,700 AND UNDER $4,800	-	-	(3.7)	5.7	3.5	-
$4,800 AND UNDER $4,900	-	-	-	3.6	4.2	.4
$4,900 AND UNDER $5,000	-	-	-	4.9	4.4	.2
$5,000 AND UNDER $5,100	-	-	-	3.1	7.8	1.6
$5,100 AND UNDER $5,200	-	-	-	2.3	3.6	.2
$5,200 AND UNDER $5,300	-	-	-	2.8	3.4	3.8
$5,300 AND UNDER $5,400	-	-	-	1.9	1.9	.2
$5,400 AND UNDER $5,500	-	-	-	2.3	3.9	-
$5,500 AND UNDER $5,600	-	-	-	1.1	3.7	11.2
$5,600 AND UNDER $5,700	-	-	-	(3.1)	4.7	11.2
$5,700 AND UNDER $5,800	-	-	-	-	1.7	10.8
$5,800 AND UNDER $5,900	-	-	-	-	3.8	12.6
$5,900 AND UNDER $6,000	-	-	-	-	2.8	1.9
$6,000 AND UNDER $6,100	-	-	-	-	1.2	1.8
$6,100 AND UNDER $6,200	-	-	-	-	2.2	1.8
$6,200 AND UNDER $6,300	-	-	-	-	4.3	3.3
$6,300 AND UNDER $6,400	-	-	-	-	1.9	3.9
$6,400 AND UNDER $6,500	-	-	-	-	4.7	3.9
$6,500 AND UNDER $6,600	-	-	-	-	1.0	2.2
$6,600 AND UNDER $6,700	-	-	-	-	1.5	2.8
$6,700 AND UNDER $6,800	-	-	-	-	1.2	2.8
$6,800 AND UNDER $6,900	-	-	-	-	1.6	3.5
$6,900 AND UNDER $7,000	-	-	-	-	1.1	3.5
$7,000 AND UNDER $7,100	-	-	-	-	.9	4.7
$7,100 AND UNDER $7,200	-	-	-	-	.8	1.5
$7,200 AND UNDER $7,300	-	-	-	-	(2.1)	1.8
$7,300 AND UNDER $7,400	-	-	-	-	-	2.6
$7,400 AND UNDER $7,500	-	-	-	-	-	.8
$7,500 AND UNDER $7,600	-	-	-	-	-	3.3
$7,600 AND UNDER $7,700	-	-	-	-	-	.8
$7,700 AND UNDER $7,800	-	-	-	-	-	1.2
$7,800 AND UNDER $7,900	-	-	-	-	-	-
$7,900 AND UNDER $8,000	-	-	-	-	-	1.8
$8,000 AND UNDER $8,100	-	-	-	-	-	2.8
$8,100 AND UNDER $8,200	-	-	-	-	-	2.4
$8,200 AND UNDER $8,300	-	-	-	-	-	4.1
$8,300 AND UNDER $8,400	-	-	-	-	-	2.8
$8,400 AND UNDER $8,500	-	-	-	-	-	1.8
$8,500 AND UNDER $8,600	-	-	-	-	-	1.8
$8,600 AND UNDER $8,700	-	-	-	-	-	.4
$8,700 AND UNDER $8,800	-	-	-	-	-	-
$8,800 AND UNDER $8,900	-	-	-	-	-	.4
$8,900 AND UNDER $9,000	-	-	-	-	-	.1
$9,000 AND UNDER $9,100	-	-	-	-	-	-
$9,100 AND UNDER $9,200	-	-	-	-	-	.2
$9,200 AND UNDER $9,300	-	-	-	-	-	-
$9,300 AND UNDER $9,400	-	-	-	-	-	.4
$9,400 AND UNDER $9,500	-	-	-	-	-	1.8
$9,500 AND UNDER $9,600	-	-	-	-	-	.4
$9,600 AND UNDER $9,700	-	-	-	-	-	2.8
$9,700 AND UNDER $9,800	-	-	-	-	-	-
$9,800 AND UNDER $9,900	-	-	-	-	-	-
$9,900 AND UNDER $10,000	-	-	-	-	-	(1.0)
$10,000 AND UNDER $10,500	-	-	-	-	-	-
$10,500 AND UNDER $10,600	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	1511.0	2903.0	3516.0	3342.0	1891.0	492.0
AVERAGE MONTHLY SALARY	$2343.2	$2879.2	$3522.5	$4432.8	$5467.3	$7876.9

See footnotes at end of table.

Table 4. Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	BUYERS			
	I	II	III	IV
$925 AND UNDER $950	0.2	-	-	-
$1,050 AND UNDER $1,100	1.7	-	-	-
$1,100 AND UNDER $1,150	.9	-	-	-
$1,150 AND UNDER $1,200	3.2	-	-	-
$1,200 AND UNDER $1,250	3.7	-	-	-
$1,250 AND UNDER $1,300	5.3	(0.5)	-	-
$1,300 AND UNDER $1,350	4.4	1.0	-	-
$1,350 AND UNDER $1,400	4.2	.2	-	-
$1,400 AND UNDER $1,450	7.9	1.4	-	-
$1,450 AND UNDER $1,500	8.7	1.9	-	-
$1,500 AND UNDER $1,550	8.7	1.9	-	-
$1,550 AND UNDER $1,600	8.3	4.8	-	-
$1,600 AND UNDER $1,650	7.3	4.2	-	-
$1,650 AND UNDER $1,700	4.9	4.4	-	-
$1,700 AND UNDER $1,750	5.5	3.8	-	-
$1,750 AND UNDER $1,800	4.7	6.1	(2.0)	-
$1,800 AND UNDER $1,850	3.5	7.8	1.8	-
$1,850 AND UNDER $1,900	2.1	6.5	1.6	-
$1,900 AND UNDER $1,950	3.9	7.2	3.1	-
$1,950 AND UNDER $2,000	2.8	6.7	3.8	-
$2,000 AND UNDER $2,050	1.4	5.4	3.7	-
$2,050 AND UNDER $2,100	1.8	5.4	4.6	-
$2,100 AND UNDER $2,150	.5	4.6	4.8	(2.0)
$2,150 AND UNDER $2,200	1.1	3.9	5.2	1.3
$2,200 AND UNDER $2,250	(3.8)	4.2	5.4	1.4
$2,250 AND UNDER $2,300	-	2.8	4.7	1.4
$2,300 AND UNDER $2,350	-	1.7	6.4	2.5
$2,350 AND UNDER $2,400	-	2.8	5.4	3.8
$2,400 AND UNDER $2,450	-	2.8	5.6	2.5
$2,450 AND UNDER $2,500	-	1.7	4.7	5.2
$2,500 AND UNDER $2,600	-	1.9	10.5	6.8
$2,600 AND UNDER $2,700	-	2.1	7.6	6.9
$2,700 AND UNDER $2,800	-	1.8	5.7	8.5
$2,800 AND UNDER $2,900	-	1.8	5.3	8.3
$2,900 AND UNDER $3,000	-	(0.7)	3.3	18.5
$3,000 AND UNDER $3,100	-	-	2.3	7.2
$3,100 AND UNDER $3,200	-	-	1.5	6.1
$3,200 AND UNDER $3,300	-	-	1.3	6.1
$3,300 AND UNDER $3,400	-	-	(2.2)	5.9
$3,400 AND UNDER $3,500	-	-	-	4.3
$3,500 AND UNDER $3,600	-	-	-	2.6
$3,600 AND UNDER $3,700	-	-	-	2.4
$3,700 AND UNDER $3,800	-	-	-	1.0
$3,800 AND UNDER $3,900	-	-	-	1.1
$3,900 AND UNDER $4,000	-	-	-	.8
$4,000 AND UNDER $4,100	-	-	-	.4
$4,100 AND UNDER $4,200	-	-	-	1.2
$4,200 AND UNDER $4,300	-	-	-	(2.8)
$4,300 AND UNDER $4,400	-	-	-	-
$4,400 AND UNDER $4,500	-	-	-	-
$4,500 AND UNDER $4,600	-	-	-	-
$4,600 AND UNDER $4,700	-	-	-	-
$4,700 AND UNDER $4,800	-	-	-	-
$4,800 AND UNDER $4,900	-	-	-	-
$4,900 AND UNDER $5,000	-	-	-	-
$5,000 AND UNDER $5,100	-	-	-	-
$5,100 AND UNDER $5,200	-	-	-	-
$5,400 AND UNDER $5,500	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	6726.0	18096.0	16259.0	5366.0
AVERAGE MONTHLY SALARY	$1593.3	$1969.[illegible]	$2619.4	$2964.2

See footnotes at end of table.

Table 4. Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	CHEMISTS						
	I	II	III	IV	V	VI	VII
$1,200 AND UNDER $1,250	(1.0)	-	-	-	-	-	-
$1,250 AND UNDER $1,300	1.7	-	-	-	-	-	-
$1,300 AND UNDER $1,350	1.1	-	-	-	-	-	-
$1,350 AND UNDER $1,400	3.9	-	-	-	-	-	-
$1,400 AND UNDER $1,450	5.6	(0.4)	-	-	-	-	-
$1,450 AND UNDER $1,500	7.6	1.6	-	-	-	-	-
$1,500 AND UNDER $1,550	5.9	1.3	-	-	-	-	-
$1,550 AND UNDER $1,600	4.6	2.8	-	-	-	-	-
$1,600 AND UNDER $1,650	7.8	2.5	-	-	-	-	-
$1,650 AND UNDER $1,700	2.9	3.7	(2.9)	-	-	-	-
$1,700 AND UNDER $1,750	12.6	4.2	1.2	-	-	-	-
$1,750 AND UNDER $1,800	4.5	7.3	1.3	-	-	-	-
$1,800 AND UNDER $1,850	4.4	6.6	.9	-	-	-	-
$1,850 AND UNDER $1,900	5.8	7.4	.9	-	-	-	-
$1,900 AND UNDER $1,950	4.7	7.9	2.3	-	-	-	-
$1,950 AND UNDER $2,000	3.8	5.6	2.8	-	-	-	-
$2,000 AND UNDER $2,050	2.6	5.9	2.6	-	-	-	-
$2,050 AND UNDER $2,100	2.5	7.6	3.4	-	-	-	-
$2,100 AND UNDER $2,150	2.1	3.5	2.9	-	-	-	-
$2,150 AND UNDER $2,200	1.5	6.9	4.6	(3.2)	-	-	-
$2,200 AND UNDER $2,250	2.9	4.6	4.0	1.1	-	-	-
$2,250 AND UNDER $2,300	1.3	4.8	6.9	1.8	-	-	-
$2,300 AND UNDER $2,350	1.7	2.3	5.9	1.8	-	-	-
$2,350 AND UNDER $2,400	1.4	2.6	5.5	1.4	-	-	-
$2,400 AND UNDER $2,450	2.1	2.8	8.0	3.4	-	-	-
$2,450 AND UNDER $2,500	.6	1.7	3.8	3.0	(1.0)	-	-
$2,500 AND UNDER $2,600	1.2	2.3	7.4	6.4	1.1	-	-
$2,600 AND UNDER $2,700	(0.7)	1.4	6.4	8.5	1.2	-	1.2
$2,700 AND UNDER $2,800	-	1.3	7.2	9.3	1.5	-	-
$2,800 AND UNDER $2,900	-	(1.3)	5.4	8.3	2.6	-	-
$2,900 AND UNDER $3,000	-	-	3.9	11.3	4.6	-	-
$3,000 AND UNDER $3,100	-	-	2.5	8.3	4.3	-	-
$3,100 AND UNDER $3,200	-	-	1.9	7.4	6.5	(1.0)	.3
$3,200 AND UNDER $3,300	-	-	1.9	7.1	7.9	1.2	-
$3,300 AND UNDER $3,400	-	-	1.1	5.8	7.9	1.2	-
$3,400 AND UNDER $3,500	-	-	1.2	4.7	9.3	1.6	.4
$3,500 AND UNDER $3,600	-	-	(1.1)	2.6	8.1	3.2	.8
$3,600 AND UNDER $3,700	-	-	-	1.2	7.1	5.9	1.6
$3,700 AND UNDER $3,800	-	-	-	.9	5.4	4.6	3.2
$3,800 AND UNDER $3,900	-	-	-	1.3	6.8	10.8	.8
$3,900 AND UNDER $4,000	-	-	-	(3.1)	5.9	8.0	.8
$4,000 AND UNDER $4,100	-	-	-	-	4.8	9.0	3.9
$4,100 AND UNDER $4,200	-	-	-	-	3.6	7.6	3.9
$4,200 AND UNDER $4,300	-	-	-	-	2.6	3.4	2.3
$4,300 AND UNDER $4,400	-	-	-	-	2.1	9.8	4.2
$4,400 AND UNDER $4,500	-	-	-	-	2.8	4.2	7.6
$4,500 AND UNDER $4,600	-	-	-	-	.8	6.8	1.7
$4,600 AND UNDER $4,700	-	-	-	-	1.1	3.2	7.6
$4,700 AND UNDER $4,800	-	-	-	-	(2.7)	2.9	14.1
$4,800 AND UNDER $4,900	-	-	-	-	-	4.2	1.9
$4,900 AND UNDER $5,000	-	-	-	-	-	2.9	2.8
$5,000 AND UNDER $5,100	-	-	-	-	-	2.5	3.8
$5,100 AND UNDER $5,200	-	-	-	-	-	2.7	1.8
$5,200 AND UNDER $5,300	-	-	-	-	-	.5	1.7
$5,300 AND UNDER $5,400	-	-	-	-	-	.5	2.8
$5,400 AND UNDER $5,500	-	-	-	-	-	1.2	3.2
$5,500 AND UNDER $5,600	-	-	-	-	-	(2.5)	5.1
$5,600 AND UNDER $5,700	-	-	-	-	-	-	2.2
$5,700 AND UNDER $5,800	-	-	-	-	-	-	1.4
$5,800 AND UNDER $5,900	-	-	-	-	-	-	4.8
$5,900 AND UNDER $6,000	-	-	-	-	-	-	.8
$6,000 AND UNDER $6,100	-	-	-	-	-	-	2.4
$6,100 AND UNDER $6,200	-	-	-	-	-	-	1.7
$6,200 AND UNDER $6,300	-	-	-	-	-	-	.1
$6,300 AND UNDER $6,400	-	-	-	-	-	-	.5
$6,400 AND UNDER $6,500	-	-	-	-	-	-	2.6
$6,500 AND UNDER $6,600	-	-	-	-	-	-	.8
$6,600 AND UNDER $6,700	-	-	-	-	-	-	.4
$6,700 AND UNDER $6,800	-	-	-	-	-	-	.9
$6,800 AND UNDER $6,900	-	-	-	-	-	-	2.3
$6,900 AND UNDER $7,000	-	-	-	-	-	-	(4.0)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	2653.0	5255.8	9197.0	9413.0	6858.8	2312.0	779.0
AVERAGE MONTHLY SALARY	$1788.4	$2028.4	$2451.1	$2953.3	$3574.4	$4252.3	$5039.3

See footnotes at end of table.

Table 4. Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	COMPUTER PROGRAMMERS/PROGRAMMER ANALYSTS				
	I	II	III	IV	V
$1,000 AND UNDER $1,050	-	-	-	-	-
$1,050 AND UNDER $1,100	(1.3)	-	-	-	-
$1,100 AND UNDER $1,150	1.4	-	-	-	-
$1,150 AND UNDER $1,200	2.8	-	-	-	-
$1,200 AND UNDER $1,250	9.2	-	-	-	-
$1,250 AND UNDER $1,300	3.5	(1.4)	-	-	-
$1,300 AND UNDER $1,350	5.7	1.3	-	-	-
$1,350 AND UNDER $1,400	5.1	1.6	-	-	-
$1,400 AND UNDER $1,450	4.4	3.8	-	-	-
$1,450 AND UNDER $1,500	7.4	4.3	-	-	-
$1,500 AND UNDER $1,550	5.5	5.1	(1.5)	-	-
$1,550 AND UNDER $1,600	6.5	5.2	1.1	-	-
$1,600 AND UNDER $1,650	4.9	6.2	2.8	-	-
$1,650 AND UNDER $1,700	5.6	6.7	2.3	-	-
$1,700 AND UNDER $1,750	4.4	6.8	2.4	-	-
$1,750 AND UNDER $1,800	5.7	6.5	4.8	-	-
$1,800 AND UNDER $1,850	4.3	6.2	3.9	(2.1)	-
$1,850 AND UNDER $1,900	3.6	5.4	5.6	1.8	-
$1,900 AND UNDER $1,950	5.1	6.8	5.7	1.8	-
$1,950 AND UNDER $2,000	4.8	5.2	5.6	1.9	-
$2,000 AND UNDER $2,050	3.1	4.3	6.8	2.8	-
$2,050 AND UNDER $2,100	2.5	3.9	5.3	3.1	-
$2,100 AND UNDER $2,150	2.2	3.2	6.6	5.1	-
$2,150 AND UNDER $2,200	2.7	3.1	4.9	3.7	-
$2,200 AND UNDER $2,250	1.6	2.3	5.6	4.7	-
$2,250 AND UNDER $2,300	(2.5)	2.4	5.4	3.9	(3.5)
$2,300 AND UNDER $2,350	-	2.8	4.1	5.6	1.8
$2,350 AND UNDER $2,400	-	1.5	4.3	5.6	3.0
$2,400 AND UNDER $2,450	-	1.6	3.7	10.6	3.6
$2,450 AND UNDER $2,500	-	1.4	5.8	11.1	9.7
$2,500 AND UNDER $2,600	-	1.7	4.1	11.9	6.5
$2,600 AND UNDER $2,700	-	(1.1)	2.4	8.6	9.1
$2,700 AND UNDER $2,800	-	-	1.7	6.8	.1.9
$2,800 AND UNDER $2,900	-	-	1.3	4.3	11.2
$2,900 AND UNDER $3,000	-	-	(1.7)	2.8	9.2
$3,000 AND UNDER $3,100	-	-	-	2.6	9.3
$3,100 AND UNDER $3,200	-	-	-	1.8	5.8
$3,200 AND UNDER $3,300	-	-	-	1.3	5.6
$3,300 AND UNDER $3,400	-	-	-	(1.0)	3.6
$3,400 AND UNDER $3,500	-	-	-	-	3.6
$3,500 AND UNDER $3,600	-	-	-	-	2.9
$3,600 AND UNDER $3,700	-	-	-	-	1.6
$3,700 AND UNDER $3,800	-	-	-	-	1.4
$3,800 AND UNDER $3,900	-	-	-	-	(2.5)
$3,900 AND UNDER $4,000	-	-	-	-	-
$4,000 AND UNDER $4,100	-	-	-	-	-
$4,100 AND UNDER $4,200	-	-	-	-	-
$4,200 AND UNDER $4,300	-	-	-	-	-
$4,300 AND UNDER $4,400	-	-	-	-	-
$4,400 AND UNDER $4,500	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	14660.6	35263.0	31033.0	29142.6	9654.8
AVERAGE MONTHLY SALARY	$1648.1	$1845.7	$2185.3	$2680.5	$3177.8

See footnotes at end of table.

Table 4: Continued—Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1983)

MONTHLY SALARY	ENGINEERS							
	I	II	III	IV	V	VI	VII	VIII
$1,500 AND UNDER $1,550	(1.8)	-	-	-	-	-	-	-
$1,550 AND UNDER $1,600	1.1	-	-	-	-	-	-	-
$1,600 AND UNDER $1,650	.7	(0.5)	-	-	-	-	-	-
$1,650 AND UNDER $1,700	1.3	1.8	-	-	-	-	-	-
$1,700 AND UNDER $1,750	1.5	1.0	-	-	-	-	-	-
$1,750 AND UNDER $1,800	2.0	.5	-	-	-	-	-	-
$1,800 AND UNDER $1,850	2.1	1.8	-	-	-	-	-	-
$1,850 AND UNDER $1,900	2.9	.9	-	-	-	-	-	-
$1,900 AND UNDER $1,950	4.8	2.1	(1.8)	-	-	-	-	-
$1,950 AND UNDER $2,000	5.4	2.9	1.0	-	-	-	-	-
$2,000 AND UNDER $2,050	8.8	3.6	1.2	-	-	-	-	-
$2,050 AND UNDER $2,100	8.9	4.7	1.6	-	-	-	-	-
$2,100 AND UNDER $2,150	11.5	6.3	2.3	-	-	-	-	-
$2,150 AND UNDER $2,200	10.1	7.3	2.2	-	-	-	-	-
$2,200 AND UNDER $2,250	11.4	8.6	3.4	-	-	-	-	-
$2,250 AND UNDER $2,300	7.4	8.9	4.3	-	-	-	-	-
$2,300 AND UNDER $2,350	6.8	8.9	5.1	(2.8)	-	-	-	-
$2,350 AND UNDER $2,400	2.8	7.5	4.8	1.4	-	-	-	-
$2,400 AND UNDER $2,450	2.8	7.4	5.8	1.6	-	-	-	-
$2,450 AND UNDER $2,500	2.1	5.6	5.8	1.9	-	-	-	-
$2,500 AND UNDER $2,600	2.1	8.8	11.5	4.5	-	-	-	-
$2,600 AND UNDER $2,700	2.3	5.0	11.5	5.9	(1.4)	-	-	-
$2,700 AND UNDER $2,800	(0.8)	3.1	10.1	7.5	1.3	-	-	-
$2,800 AND UNDER $2,900	*	2.1	6.9	8.9	2.2	-	-	-
$2,900 AND UNDER $3,000	-	1.0	6.9	9.5	3.2	-	-	-
$3,000 AND UNDER $3,100	-	(1.3)	4.6	10.8	4.3	(1.3)	-	-
$3,100 AND UNDER $3,200	-	-	2.8	9.9	4.3	1.1	-	-
$3,200 AND UNDER $3,300	-	-	1.7	9.3	6.4	1.5	-	-
$3,300 AND UNDER $3,400	-	-	1.0	8.8	7.4	2.8	-	-
$3,400 AND UNDER $3,500	-	-	(1.6)	6.0	8.4	2.6	-	-
$3,500 AND UNDER $3,600	-	-	-	3.8	9.8	3.2	-	-
$3,600 AND UNDER $3,700	-	-	-	2.6	8.7	4.3	(2.2)	-
$3,700 AND UNDER $3,800	-	-	-	1.9	8.2	5.1	1.1	-
$3,800 AND UNDER $3,900	-	-	-	1.2	7.6	6.7	2.5	-
$3,900 AND UNDER $4,000	-	-	-	(2.3)	6.2	6.2	3.6	-
$4,000 AND UNDER $4,100	-	-	-	-	5.8	6.8	3.1	-
$4,100 AND UNDER $4,200	-	-	-	-	4.4	7.3	3.3	-
$4,200 AND UNDER $4,300	-	-	-	-	3.1	6.4	3.2	-
$4,300 AND UNDER $4,400	-	-	-	-	2.7	6.9	3.6	(2.0)
$4,400 AND UNDER $4,500	-	-	-	-	1.9	6.8	6.2	1.1
$4,500 AND UNDER $4,600	-	-	-	-	1.5	5.8	7.9	2.8
$4,600 AND UNDER $4,700	-	-	-	-	(2.5)	4.4	7.5	1.9
$4,700 AND UNDER $4,800	-	-	-	-	-	4.4	6.8	4.9
$4,800 AND UNDER $4,900	-	-	-	-	-	3.1	5.6	2.7
$4,900 AND UNDER $5,000	-	-	-	-	-	3.0	4.3	4.9
$5,000 AND UNDER $5,100	-	-	-	-	-	2.6	5.3	6.7
$5,100 AND UNDER $5,200	-	-	-	-	-	1.9	5.8	10.7
$5,200 AND UNDER $5,300	-	-	-	-	-	1.8	5.1	3.4
$5,300 AND UNDER $5,400	-	-	-	-	-	1.1	5.1	6.3
$5,400 AND UNDER $5,500	-	-	-	-	-	1.1	2.9	8.4
$5,500 AND UNDER $5,600	-	-	-	-	-	(4.1)	2.1	7.9
$5,600 AND UNDER $5,700	-	-	-	-	-	-	1.8	4.3
$5,700 AND UNDER $5,800	-	-	-	-	-	-	2.0	3.6
$5,800 AND UNDER $5,900	-	-	-	-	-	-	1.7	4.3
$5,900 AND UNDER $6,000	-	-	-	-	-	-	1.5	3.6
$6,000 AND UNDER $6,100	-	-	-	-	-	-	(6.7)	2.7
$6,100 AND UNDER $6,200	-	-	-	-	-	-	-	1.4
$6,200 AND UNDER $6,300	-	-	-	-	-	-	-	1.2
$6,300 AND UNDER $6,400	-	-	-	-	-	-	-	1.3
$6,400 AND UNDER $6,500	-	-	-	-	-	-	-	1.4
$6,500 AND UNDER $6,600	-	-	-	-	-	-	-	1.9
$6,600 AND UNDER $6,700	-	-	-	-	-	-	-	1.2
$6,700 AND UNDER $6,800	-	-	-	-	-	-	-	(7.8)
$6,800 AND UNDER $6,900	-	-	-	-	-	-	-	-
$6,900 AND UNDER $7,000	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	32588.0	64498.0	131848.0	138684.0	99584.0	44426.0	12383.0	3129.0
AVERAGE MONTHLY SALARY	$2129.6	$2314.1	$2688.9	$3060.5	$3643.3	$4288.3	$4867.3	$5578.2

[1] For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 5. Employment distribution by salary: Technical support occupations

(Percent distribution of employees in selected technical support occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	ENGINEERING TECHNICIANS					DRAFTERS				
	I	II	III	IV	V	I	II	III	IV	V
$700 AND UNDER $725	-	-	-	-	-	(2.2)	-	-	-	-
$725 AND UNDER $750	-	-	-	-	-	1.0	-	-	-	-
$750 AND UNDER $775	-	-	-	-	-	.3	-	-	-	-
$775 AND UNDER $800	-	-	-	-	-	6.1	-	-	-	-
$800 AND UNDER $825	-	-	-	-	-	.2	-	-	-	-
$825 AND UNDER $850	-	-	-	-	-	4.7	(1.0)	-	-	-
$850 AND UNDER $875	-	-	-	-	-	8.4	1.8	-	-	-
$875 AND UNDER $900	-	-	-	-	-	1.9	.1	-	-	-
$900 AND UNDER $925	-	-	-	-	-	3.8	.9	-	-	-
$925 AND UNDER $950	(2.8)	-	-	-	-	9.1	.7	-	-	-
$950 AND UNDER $975	1.9	-	-	-	-	11.2	1.9	-	-	-
$975 AND UNDER $1,000	2.4	-	-	-	-	6.1	1.9	-	-	-
$1,000 AND UNDER $1,050	4.0	(1.2)	-	-	-	13.6	7.3	(1.5)	-	-
$1,050 AND UNDER $1,100	6.7	1.4	-	-	-	6.0	5.6	1.3	-	-
$1,100 AND UNDER $1,150	8.7	1.6	-	-	-	6.1	8.9	2.4	-	-
$1,150 AND UNDER $1,200	7.9	4.4	(0.4)	-	-	3.9	8.4	2.8	-	-
$1,200 AND UNDER $1,250	9.3	3.6	1.0	-	-	4.8	10.3	5.5	-	-
$1,250 AND UNDER $1,300	11.2	5.9	1.2	-	-	4.9	8.3	7.8	(1.2)	-
$1,300 AND UNDER $1,350	6.4	6.6	1.4	-	-	2.5	7.4	6.0	1.3	-
$1,350 AND UNDER $1,400	5.3	10.3	1.8	-	-	.5	4.3	8.4	2.5	-
$1,400 AND UNDER $1,450	8.2	8.0	2.9	-	-	.3	3.2	6.9	1.8	-
$1,450 AND UNDER $1,500	7.0	10.2	5.5	-	-	2.2	3.1	8.8	2.8	-
$1,500 AND UNDER $1,550	3.5	7.7	4.5	(2.2)	-	(0.7)	4.0	7.7	5.8	(0.8)
$1,550 AND UNDER $1,600	3.8	7.7	7.8	1.3	-	-	5.6	5.6	5.2	1.8
$1,600 AND UNDER $1,650	2.4	5.9	7.2	7.7	-	-	6.3	4.7	5.7	.8
$1,650 AND UNDER $1,700	3.1	4.7	7.3	3.6	-	-	4.9	5.7	6.8	1.7
$1,700 AND UNDER $1,750	1.7	4.7	7.8	3.8	(2.0)	-	1.7	6.1	5.8	
$1,750 AND UNDER $1,800	1.2	3.8	6.2	4.6	1.0	-	1.1	3.8	7.2	1.8
$1,800 AND UNDER $1,850	(2.2)	2.3	5.7	4.4	1.1	-	(1.9)	2.2	7.6	2.6
$1,850 AND UNDER $1,900	-	2.6	5.0	5.2	1.5	-	-	2.9	6.2	2.1
$1,900 AND UNDER $1,950	-	1.1	7.2	6.4	2.5	-	-	3.1	6.4	4.4
$1,950 AND UNDER $2,000	-	1.4	4.5	6.5	2.8	-	-	2.4	5.1	4.1
$2,000 AND UNDER $2,050	-	1.5	5.3	6.8	3.3	-	-	1.1	3.4	4.0
$2,050 AND UNDER $2,100	-	(2.1)	3.2	7.5	3.6	-	-	1.3	4.1	8.1
$2,100 AND UNDER $2,150	-	-	3.1	6.6	4.3	-	-	(3.1)	3.2	4.6
$2,150 AND UNDER $2,200	-	-	2.1	6.8	5.4	-	-	-	4.1	5.1
$2,200 AND UNDER $2,250	-	-	1.6	6.6	7.1	-	-	-	2.2	4.8
$2,250 AND UNDER $2,300	-	-	1.6	5.3	6.3	-	-	-	3.6	8.6
$2,300 AND UNDER $2,350	-	-	1.5	4.5	7.9	-	-	-	2.2	4.1
$2,350 AND UNDER $2,400	-	-	1.5	3.9	5.7	-	-	-	1.8	3.8
$2,400 AND UNDER $2,450	-	-	(3.0)	2.4	9.8	-	-	-	1.4	5.7
$2,450 AND UNDER $2,500	-	-	-	1.9	6.2	-	-	-	1.0	3.7
$2,500 AND UNDER $2,600	-	-	-	3.3	10.8	-	-	-	1.3	7.8
$2,600 AND UNDER $2,700	-	-	-	2.0	6.9	-	-	-	1.2	4.5
$2,700 AND UNDER $2,800	-	-	-	(1.9)	9.3	-	-	-	(0.8)	6.3
$2,800 AND UNDER $2,900	-	-	-	-	3.2	-	-	-	-	2.8
$2,900 AND UNDER $3,000	-	-	-	-	1.4	-	-	-	-	1.4
$3,000 AND UNDER $3,100	-	-	-	-	(1.7)	-	-	-	-	1.9
$3,100 AND UNDER $3,200	-	-	-	-	-	-	-	-	-	1.3
$3,200 AND UNDER $3,300	-	-	-	-	-	-	-	-	-	1.9
$3,300 AND UNDER $3,400	-	-	-	-	-	-	-	-	-	(0.2)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	4996.0	18416.0	31731.0	35260.0	28491.0	2029.0	11234.0	22217.0	24714.0	20170.0
AVERAGE MONTHLY SALARY	$1303.9	$1586.4	$1788.3	$2088.4	$2369.0	$1011.8	$1302.4	$1533.4	$1871.2	$2316.2

See footnotes at end of table.

29

Table 5. Continued—Employment distribution by salary: Technical support occupations

(Percent distribution of employees in selected technical support occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1983)

MONTHLY SALARY	COMPUTER OPERATORS						PHOTOGRAPHERS		
	I	II	III	IV	V	VI	II	III	IV
$700 AND UNDER $725	(0.5)	-	-	-	-	-	-	-	-
$725 AND UNDER $750	1.9	-	-	-	-	-	-	-	-
$750 AND UNDER $775	.8	(0.4)	-	-	-	-	-	-	-
$775 AND UNDER $800	2.2	1.8	-	-	-	-	-	-	-
$800 AND UNDER $825	4.3	.9	-	-	-	-	-	-	-
$825 AND UNDER $850	3.5	.9	-	-	-	-	-	-	-
$850 AND UNDER $875	4.9	2.8	-	-	-	-	-	-	-
$875 AND UNDER $900	4.6	1.8	-	-	-	-	-	-	-
$900 AND UNDER $925	6.3	1.4	-	-	-	-	-	-	-
$925 AND UNDER $950	6.8	2.8	-	-	-	-	-	-	-
$950 AND UNDER $975	9.8	2.9	-	-	-	-	-	-	-
$975 AND UNDER $1,000	5.5	3.8	(3.0)	-	-	-	-	-	-
$1,000 AND UNDER $1,050	9.8	8.2	3.3	-	-	-	-	-	-
$1,050 AND UNDER $1,100	9.6	12.6	3.5	-	-	-	1.7	-	-
$1,100 AND UNDER $1,150	7.3	9.4	5.3	-	-	-	.4	-	-
$1,150 AND UNDER $1,200	5.4	11.6	7.1	(1.2)	-	-	3.4	-	-
$1,200 AND UNDER $1,250	2.6	7.8	7.2	1.1	-	-	.3	-	-
$1,250 AND UNDER $1,300	4.3	4.8	8.7	3.4	-	-	1.8	-	-
$1,300 AND UNDER $1,350	3.1	5.8	8.4	3.3	-	-	3.3	-	-
$1,350 AND UNDER $1,400	2.8	3.3	7.9	5.0	(1.4)	-	2.4	-	-
$1,400 AND UNDER $1,450	1.8	3.1	7.1	5.3	1.4	-	4.9	(0.4)	-
$1,450 AND UNDER $1,500	(3.5)	2.2	7.8	5.9	.5	-	6.4	1.4	-
$1,500 AND UNDER $1,550	-	1.6	4.8	6.5	2.7	-	6.8	1.1	-
$1,550 AND UNDER $1,600	-	1.4	4.5	6.4	3.7	-	5.1	.7	3.3
$1,600 AND UNDER $1,650	-	2.4	4.5	8.8	5.4	-	5.8	4.1	4.3
$1,650 AND UNDER $1,700	-	3.5	3.4	6.3	4.1	(1.8)	7.1	4.4	2.8
$1,700 AND UNDER $1,750	-	2.8	2.4	5.8	4.5	4.4	10.4	2.9	4.5
$1,750 AND UNDER $1,800	-	2.6	2.8	6.4	5.9	2.7	6.5	1.2	2.8
$1,800 AND UNDER $1,850	-	(1.3)	2.8	4.4	6.4	4.8	4.8	9.6	4.5
$1,850 AND UNDER $1,900	-	-	1.3	3.9	6.8	12.4	5.5	13.8	2.5
$1,900 AND UNDER $1,950	-	-	1.1	4.4	6.8	6.3	2.8	4.2	3.3
$1,950 AND UNDER $2,000	-	-	.8	5.6	7.6	11.1	4.8	3.8	2.8
$2,000 AND UNDER $2,050	-	-	1.8	4.2	6.1	10.5	3.8	2.7	5.6
$2,050 AND UNDER $2,100	-	-	(3.6)	2.2	3.6	4.2	7.5	8.4	2.8
$2,100 AND UNDER $2,150	-	-	-	1.9	2.6	5.8	.9	3.2	9.3
$2,150 AND UNDER $2,200	-	-	-	1.5	4.8	6.3	.9	3.6	6.8
$2,200 AND UNDER $2,250	-	-	-	1.2	2.6	4.6	-	7.8	2.8
$2,250 AND UNDER $2,300	-	-	-	.8	2.6	5.7	1.8	11.0	2.8
$2,300 AND UNDER $2,350	-	-	-	2.8	9.2	1.5	.3	7.8	6.8
$2,350 AND UNDER $2,400	-	-	-	1.3	2.8	6.3	.6	1.9	4.5
$2,400 AND UNDER $2,450	-	-	-	.4	1.4	5.8	.6	2.6	1.5
$2,450 AND UNDER $2,500	-	-	-	.5	2.9	1.5	.3	.4	4.5
$2,500 AND UNDER $2,600	-	-	-	1.3	3.8	.6	1.4	1.1	4.5
$2,600 AND UNDER $2,700	-	-	-	(0.6)	2.8	1.5	-	(1.6)	6.3
$2,700 AND UNDER $2,800	-	-	-	-	1.9	1.5	-	-	6.8
$2,800 AND UNDER $2,900	-	-	-	-	3.1	.4	-	-	2.3
$2,900 AND UNDER $3,000	-	-	-	-	(0.7)	2.5	-	-	.5
$3,000 AND UNDER $3,100	-	-	-	-	-	-	-	-	3.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	6003.0	17903.0	29576.0	15171.0	3136.0	477.0	705.0	736.0	397.0
AVERAGE MONTHLY SALARY	$1040.1	$1220.7	$1415.7	$1727.3	$2025.6	$2160.5	$1703.3	$2035.4	$2234.6

[1] For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 6. Employment distribution by salary: Clerical occupations

Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1983

MONTHLY SALARY	ACCOUNTING CLERKS				FILE CLERKS			KEY ENTRY OPERATORS	
	I	II	III	IV	I	II	III	I	II
$9350 AND UNDER $9375	(0.1)	-	-	-	0.1	-	-	-	-
$9375 AND UNDER $9600	1.8	-	-	-	1.8	-	-	-	-
$9600 AND UNDER $9625	1.9	-	-	-	4.1	(1.2)	-	-	-
$9625 AND UNDER $9650	2.8	-	-	-	6.8	1.6	-	-	-
$9650 AND UNDER $9675	1.6	-	-	-	5.9	3.8	-	(1.1)	-
$9675 AND UNDER $9700	3.7	-	-	-	7.1	3.1	-	1.2	-
$9700 AND UNDER $9725	3.6	(1.7)	-	-	8.6	6.6	-	1.4	-
$9725 AND UNDER $9750	4.7	1.8	-	-	8.8	7.1	(0.7)	2.6	-
$9750 AND UNDER $9775	4.7	1.2	-	-	7.1	5.9	1.1	2.8	-
$9775 AND UNDER $9800	5.2	2.8	-	-	7.6	7.6	.6	3.3	(1.5)
$9800 AND UNDER $9825	6.9	2.7	-	-	9.2	6.8	2.2	3.7	1.3
$9825 AND UNDER $9850	5.7	2.2	-	-	8.1	7.8	2.3	3.4	1.7
$9850 AND UNDER $9875	7.8	3.2	-	-	4.3	7.1	2.5	5.2	2.2
$9875 AND UNDER $9900	5.7	3.1	(2.8)	-	3.7	4.6	5.9	4.8	2.5
$9900 AND UNDER $9925	5.8	4.8	1.3	-	4.4	5.1	6.2	5.6	2.4
$9925 AND UNDER $9950	4.3	4.8	1.2	-	3.8	3.9	8.6	4.5	1.9
$9950 AND UNDER $9975	6.1	5.1	1.9	-	1.6	3.8	6.8	6.3	2.9
$9975 AND UNDER $10,000	3.7	4.5	1.8	-	1.9	2.9	4.4	5.1	3.6
$10,000 AND UNDER $10,050	6.8	10.8	4.8	(0.8)	3.1	4.5	8.8	9.7	6.8
$10,050 AND UNDER $10,100	4.1	9.6	6.1	1.2	1.8	3.8	6.6	8.6	7.7
$10,100 AND UNDER $10,150	3.8	9.4	6.7	2.8	1.1	1.9	8.3	6.5	9.4
$10,150 AND UNDER $10,200	2.8	6.7	8.6	3.2	(4.0)	1.2	3.8	3.9	7.8
$10,200 AND UNDER $10,250	2.3	6.1	8.3	4.5	-	3.8	7.3	4.4	7.3
$10,250 AND UNDER $10,300	1.4	4.2	8.8	6.1	-	.8	1.8	3.1	8.2
$10,300 AND UNDER $10,350	1.2	3.1	7.6	5.8	-	1.8	4.7	2.8	5.2
$10,350 AND UNDER $10,400	.8	2.5	6.8	5.9	-	.9	1.6	1.8	4.3
$10,400 AND UNDER $10,450	.4	1.9	6.8	5.9	-	.8	1.7	1.4	3.5
$10,450 AND UNDER $10,500	.7	1.4	3.9	5.5	-	.4	.8	1.2	3.6
$10,500 AND UNDER $10,550	.7	1.9	3.9	5.3	-	.3	2.9	1.8	3.8
$10,550 AND UNDER $10,600	.9	1.9	2.8	5.7	-	.1	3.8	1.4	2.8
$10,600 AND UNDER $10,650	1.9	1.6	2.7	4.4	-	.7	1.2	.8	1.8
$10,650 AND UNDER $10,700	(1.1)	1.6	4.6	7.9	-	.3	.6	.9	1.8
$10,700 AND UNDER $10,750	-	(3.1)	1.9	4.9	-	.3	.3	1.2	.9
$10,750 AND UNDER $10,800	-	-	1.6	3.6	-	(2/)	.2	(1.9)	.9
$10,800 AND UNDER $10,850	-	-	1.3	3.9	-	.3	1.3	-	1.8
$10,850 AND UNDER $10,900	-	-	1.2	2.9	-	1.3	(2/)	-	1.8
$10,900 AND UNDER $10,950	-	-	1.7	2.6	-	(0.3)	.2	-	1.2
$10,950 AND UNDER $11,000	-	-	(4.0)	2.5	-	-	1.2	-	(3.2)
$11,000 AND UNDER $11,050	-	-	-	2.9	-	-	1.4	-	-
$11,050 AND UNDER $11,100	-	-	-	2.8	-	-	1.0	-	-
$11,100 AND UNDER $11,150	-	-	-	2.5	-	-	.9	-	-
$11,150 AND UNDER $11,200	-	-	-	1.9	-	-	(0.2)	-	-
$11,200 AND UNDER $11,250	-	-	-	1.8	-	-	-	-	-
$11,250 AND UNDER $11,300	-	-	-	1.3	-	-	-	-	-
$11,300 AND UNDER $11,350	-	-	-	(2.4)	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	26763.0	67578.0	59324.0	21359.0	19738.0	10926.0	3457.0	52682.0	32493.0
AVERAGE MONTHLY SALARY	$932.5	$1122.2	$1339.6	$1621.5	$808.5	$918.7	$1141.6	$1048.4	$1299.5

See footnotes at end of table.

Table 6. Continued—Employment distribution by salary: Clerical occupations

(Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1982)

MONTHLY SALARY	MESSENGERS	PERSONNEL CLERKS/ASSISTANTS				PURCHASING ASSISTANTS		
		I	II	III	IV	I	II	III
$575 AND UNDER $600	(0.5)	-	-	-	-	-	-	-
$600 AND UNDER $625	2.4	-	-	-	-	-	-	-
$625 AND UNDER $650	2.9	-	-	-	-	-	-	-
$650 AND UNDER $675	3.1	-	-	-	-	-	-	-
$675 AND UNDER $700	4.1	-	-	-	-	-	-	-
$700 AND UNDER $725	4.6	-	-	-	-	-	-	-
$725 AND UNDER $750	3.4	1.4	-	-	-	0.2	-	-
$750 AND UNDER $775	6.6	.1	-	-	-	1.5	-	-
$775 AND UNDER $800	6.1	2.9	-	-	-			
$800 AND UNDER $825	7.8	2.5	-	-	-	1.6	-	-
$825 AND UNDER $850	4.9	3.1	(0.6)	-	-	.4	-	-
$850 AND UNDER $875	6.8	2.1	1.8	-	-	.2	-	-
$875 AND UNDER $900	5.4	5.9	1.8	-	-	5.8	-	-
$900 AND UNDER $925	4.9	7.7	.1	-	-	2.7	-	-
$925 AND UNDER $950	4.5	1.7	.9	-	-	4.7	-	-
$950 AND UNDER $975	4.7	6.5	2.8	-	-	2.7	(1.9)	-
$975 AND UNDER $1,000	3.4	4.5	1.7	-	-	5.1	1.2	-
$1,000 AND UNDER $1,050	6.1	10.3	7.1	(2.6)	(0.2)	10.4	2.8	-
$1,050 AND UNDER $1,100	4.8	6.6	11.4	4.1	1.1	7.8	2.1	-
$1,100 AND UNDER $1,150	1.7	12.8	10.2	4.7	2.4	7.4	4.6	-
$1,150 AND UNDER $1,200	2.8	12.8	10.8	4.5	1.2	5.6	4.2	-
$1,200 AND UNDER $1,250	1.4	4.8	10.4	7.1	1.6	10.4	5.6	-
$1,250 AND UNDER $1,300	.7	3.9	9.1	8.9	3.5	6.9	2.5	(1.1)
$1,300 AND UNDER $1,350	.8	2.4	6.2	10.6	6.8	5.8	4.7	2.4
$1,350 AND UNDER $1,400	1.0	2.6	4.8	5.8	2.9	1.9	5.1	1.8
$1,400 AND UNDER $1,450	1.8	1.2	4.3	12.6	5.9	3.7	5.8	2.8
$1,450 AND UNDER $1,500	(3.9)	.4	2.9	3.9	6.2	2.7	7.4	1.7
$1,500 AND UNDER $1,550	-	.9	4.1	3.8	11.4	1.4	6.7	4.4
$1,550 AND UNDER $1,600	-	.5	2.8	7.4	7.7	2.4	7.5	3.9
$1,600 AND UNDER $1,650	-	.4	2.8	4.4	4.5	1.5	4.4	2.4
$1,650 AND UNDER $1,700	-	-	2.7	3.1	6.9	1.6	4.8	2.9
$1,700 AND UNDER $1,750	-	.2	2.4	2.1	2.7	.5	2.4	2.6
$1,750 AND UNDER $1,800	-	.2	.4	2.6	4.9	.9	5.1	2.8
$1,800 AND UNDER $1,850	-	.3	1.6	3.1	4.1	1.8	4.6	3.1
$1,850 AND UNDER $1,900	-	1.1	1.3	2.8	.5	.7	3.9	2.3
$1,900 AND UNDER $1,950	-	-	.8	.9	2.6	.3	1.8	4.0
$1,950 AND UNDER $2,000	-	.1	1.1	1.9	6.2	.6	2.9	8.3
$2,000 AND UNDER $2,050	-	-	(1.4)	1.5	2.5	1.7	2.8	5.2
$2,050 AND UNDER $2,100	-	-	-	(2.0)	5.6	(2.5)	1.6	5.6
$2,100 AND UNDER $2,150	-	-	-	-	1.0	-	2.1	7.1
$2,150 AND UNDER $2,200	-	-	-	-	2.6	-	1.1	5.5
$2,200 AND UNDER $2,250	-	-	-	-	2.2	-	(3.1)	3.9
$2,250 AND UNDER $2,300	-	-	-	-	.5	-	-	6.4
$2,300 AND UNDER $2,350	-	-	-	-	.5	-	-	2.5
$2,350 AND UNDER $2,400	-	-	-	-	1.9	-	-	1.7
$2,400 AND UNDER $2,450	-	-	-	-	.8	-	-	2.7
$2,450 AND UNDER $2,500	-	-	-	-	.9	-	-	.4
$2,500 AND UNDER $2,600	-	-	-	-	1.2	-	-	.4
$2,600 AND UNDER $2,700	-	-	-	-	-	-	-	2.2
$2,700 AND UNDER $2,800	-	-	-	-	.1	-	-	2.9
$2,800 AND UNDER $2,900	-	-	-	-	-	-	-	3.1
$2,900 AND UNDER $3,000	-	-	-	-	-	-	-	.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	11746.0	1665.0	3575.0	3234.0	1528.0	3283.0	3987.0	1185.0
AVERAGE MONTHLY SALARY	$989.6	$1074.8	$1285.6	$1442.5	$1683.1	$1235.6	$1566.8	$2005.3

See footnotes at end of table.

Table 6. Continued—Employment distribution by salary: Clerical occupations

(Percent distribution of employees in selected clerical occupations by monthly salary, United States, except Alaska and Hawaii,[1] March 1963)

MONTHLY SALARY	SECRETARIES					STENOGRAPHERS		TYPISTS	
	I	II	III	IV	V	I	II	I	II
$600 AND UNDER $625	-	-	-	-	-	-	-	(0.6)	-
$625 AND UNDER $650	[2]	-	-	-	-	-	-	1.8	-
$650 AND UNDER $675	-	-	-	-	-	-	-	1.8	-
$675 AND UNDER $700	-	-	-	-	-	-	-	2.9	-
$700 AND UNDER $725	-	-	-	-	-	-	-	2.8	-
$725 AND UNDER $750	-	-	-	-	-	-	-	4.7	-
$750 AND UNDER $775	-	-	-	-	-	-	-	5.3	-
$775 AND UNDER $800	-	-	-	-	-	-	-	6.1	(2.2)
$800 AND UNDER $825	(2.9)	-	-	-	-	-	-	6.5	2.0
$825 AND UNDER $850	1.3	-	-	-	-	-	-	5.1	2.6
$850 AND UNDER $875	1.9	-	-	-	-	(3.4)	-	6.7	2.6
$875 AND UNDER $900	2.3	(1.4)	-	-	-	1.7	-	5.9	3.5
$900 AND UNDER $925	3.3	1.4	-	[2]	-	2.2	-	7.9	3.3
$925 AND UNDER $950	2.6	1.1	-	-	-	2.0	-	5.7	2.3
$950 AND UNDER $975	3.9	1.8	-	-	-	1.8	-	5.2	3.8
$975 AND UNDER $1,000	3.8	1.3	(1.8)	-	-	2.5	(0.8)	4.8	4.1
$1,000 AND UNDER $1,050	8.0	4.8	1.7	-	-	5.4	1.2	6.3	8.1
$1,050 AND UNDER $1,100	8.2	5.4	2.0	(1.2)	-	5.9	1.9	5.9	4.7
$1,100 AND UNDER $1,150	8.3	6.5	3.1	1.1	-	5.9	2.2	3.6	7.1
$1,150 AND UNDER $1,200	8.2	8.6	4.8	1.8	-	6.2	3.1	2.8	6.6
$1,200 AND UNDER $1,250	7.1	8.6	5.9	2.2	-	4.8	3.3	2.1	4.8
$1,250 AND UNDER $1,300	7.8	9.4	6.3	3.7	(2.1)	3.8	3.6	1.6	4.5
$1,300 AND UNDER $1,350	5.5	7.5	6.3	4.8	1.2	4.5	3.2	(7.1)	3.1
$1,350 AND UNDER $1,400	4.3	8.7	6.4	4.4	1.4	4.4	4.7	-	4.7
$1,400 AND UNDER $1,450	3.6	6.7	7.5	5.7	2.6	4.8	3.2	-	1.9
$1,450 AND UNDER $1,500	2.7	5.5	6.5	5.9	2.7	5.2	4.6	-	2.2
$1,500 AND UNDER $1,550	2.4	4.7	6.5	5.5	4.0	7.9	7.4	-	5.2
$1,550 AND UNDER $1,600	2.1	3.2	6.4	6.0	4.7	5.5	6.7	-	5.9
$1,600 AND UNDER $1,650	1.5	2.9	5.5	6.5	4.7	1.8	9.3	-	3.8
$1,650 AND UNDER $1,700	1.5	2.3	5.7	5.5	5.7	.1	12.5	-	5.7
$1,700 AND UNDER $1,750	.9	2.1	4.8	6.6	4.7	.9	4.1	-	1.1
$1,750 AND UNDER $1,800	.8	1.6	3.2	5.3	5.0	1.8	2.6	-	2.2
$1,800 AND UNDER $1,850	.7	1.6	2.9	6.4	6.7	.7	4.1	-	1.8
$1,850 AND UNDER $1,900	.7	1.8	2.5	4.5	4.1	2.1	4.6	-	1.7
$1,900 AND UNDER $1,950	1.8	1.8	2.1	5.8	4.8	.3	2.1	-	.4
$1,950 AND UNDER $2,000	.7	(2.0)	2.2	3.2	5.5	1.8	2.6	-	.9
$2,000 AND UNDER $2,050	.4	-	1.4	2.8	4.8	1.6	3.1	-	.5
$2,050 AND UNDER $2,100	.4	-	1.4	2.5	5.1	2.1	3.6	-	1.2
$2,100 AND UNDER $2,150	.3	-	1.8	2.2	4.9	(1.9)	3.2	-	(1.5)
$2,150 AND UNDER $2,200	.4	-	(3.3)	1.8	4.2	-	1.3	-	-
$2,200 AND UNDER $2,250	.2	-	-	1.4	4.4	-	(1.4)	-	
$2,250 AND UNDER $2,300	1.8	-	-	1.4	3.5	-	-	-	-
$2,300 AND UNDER $2,350	-	-	-	(3.2)	2.1	-	-	-	-
$2,350 AND UNDER $2,400	-	-	-	-	2.8	-	-	-	-
$2,400 AND UNDER $2,450	-	-	-	-	2.4	-	-	-	-
$2,450 AND UNDER $2,500	-	-	-	-	1.3		-		
$2,500 AND UNDER $2,600	-	-	-	-	1.7	-	-	-	-
$2,600 AND UNDER $2,700	-	-	-	-	1.1	-	-	-	-
$2,700 AND UNDER $2,800	-	-	-	-	1.2	-	-	-	-
$2,800 AND UNDER $2,900	-	-	-	-	[2]	-	-	-	-
$2,900 AND UNDER $3,000	-	-	-	-	(0.7)	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	57779.0	61103.0	102687.0	45266.0	26993.0	13635.0	8162.0	26832.0	13927.0
AVERAGE MONTHLY SALARY	$1227.7	$1339.9	$1521.2	$1686.0	$1928.1	$1358.9	$1613.9	$952.4	$1257.1

[1] For scope of study, see table A-1 in appendix A.

[2] Less than 0.05 percent.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 7. Occupational employment distribution: By industry division

(Percent distribution of employees in selected professional, administrative, technical, and clerical occupations,[1] by industry division,[2] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL	MINING	CONSTRUCTION [4]	MANUFACTURING	PUBLIC UTILITIES[3]	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE AND REAL ESTATE	SELECTED SERVICES[4]
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	10	(5)	57	11	5	(5)	18	4
AUDITORS	4	(5)	58	14	5	(5)	33	(5)
PUBLIC ACCOUNTANTS	-	-	-	-	-	-	-	100
CHIEF ACCOUNTANTS	(5)	(5)	63	4	6	(5)	13	4
ATTORNEYS	9	(5)	31	11	6	4	37	(5)
BUYERS	(5)	(5)	82	4	2	-	(5)	4
PROGRAMMERS/PROGRAMMER ANALYSTS	(5)	-	48	18	5	(5)	26	12
JOB ANALYSTS	-	-	52	18	(5)	(5)	29	5
DIRECTORS OF PERSONNEL	4	(5)	67	4	(5)	(5)	14	6
CHEMISTS	(5)	-	89	(5)	(5)	-	-	7
ENGINEERS	(5)	4	78	6	(5)	-	-	17
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	(5)	-	76	5	-	-	-	17
DRAFTERS	(5)	(5)	65	9	(5)	-	-	20
COMPUTER OPERATORS	(5)	-	41	18	4	4	24	11
PHOTOGRAPHERS	(5)	-	73	5	(5)	(5)	(5)	13
CLERICAL								
ACCOUNTING CLERKS	(5)	(5)	41	13	9	18	18	9
FILE CLERKS	(5)	(5)	16	5	4	(5)	67	(5)
KEY ENTRY OPERATORS	(5)	(5)	38	8	9	9	25	9
MESSENGERS	4	-	26	18	5	4	41	9
PERSONNEL CLERKS/ASSISTANTS	4	-	62	6	(5)	4	14	6
PURCHASING ASSISTANTS	(5)	-	84	5	(5)	-	4	(5)
SECRETARIES	(5)	1	48	9	5	(5)	23	8
STENOGRAPHERS	-	-	45	48	(5)	(5)	5	6
TYPISTS	-	(5)	33	12	(5)	(5)	43	6

[1] Each occupation includes the work levels shown in table 1.

[2] For scope of study, see table A-1 in appendix A.

[3] Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

[4] Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; credit reporting and collection agencies; computer and data processing services; management, consulting, and public and research organizations.

[5] Less than 4 percent.

Table 8. Relative salary levels: Occupation by industry division

(Relative salary levels for selected professional, administrative, technical, and clerical occupations,[1] by industry division,[2] United States except Alaska and Hawaii, March 1983)

(Average salary for each occupation in all industries = 100)

OCCUPATION AND LEVEL	MINING	CONSTRUCTION	MANUFACTURING	PUBLIC UTILITIES[3]	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE AND REAL ESTATE	SELECTED SERVICES[4]
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	113	99	99	104	97	98	91	96
AUDITORS	116	92	103	108	105	104	98	98
PUBLIC ACCOUNTANTS	-	-	-	-	-	-	-	108
CHIEF ACCOUNTANTS	(5)	(5)	99	(5)	(5)	(5)	99	78
ATTORNEYS	114	(5)	103	101	103	98	99	98
BUYERS	122	98	99	107	104	111	95	99
PROGRAMMERS/PROGRAMMER ANALYSTS	108	99	103	104	106	94	92	97
JOB ANALYSTS	(5)	84	107	106	(5)	(5)	87	93
DIRECTORS OF PERSONNEL	114	(5)	99	106	(5)	109	99	93
CHEMISTS	124	-	108	(5)	(5)	-	(5)	95
ENGINEERS	124	105	108	104	(5)	(5)	(5)	98
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	121	-	99	112	(5)	(5)	(5)	100
DRAFTERS	113	94	97	108	(5)	92	(5)	104
COMPUTER OPERATORS	110	(5)	102	114	103	(5)	91	94
PHOTOGRAPHERS	(5)	(5)	101	113	(5)	91	(5)	92
CLERICAL								
ACCOUNTING CLERKS	117	94	101	122	99	94	87	94
FILE CLERKS	121	94	112	137	98	103	95	104
KEY ENTRY OPERATORS	112	99	105	126	99	98	86	88
MESSENGERS	103	99	110	129	98	95	89	101
PERSONNEL CLERKS/ASSISTANTS	117	96	101	105	102	91	98	99
PURCHASING ASSISTANTS	119	(5)	108	106	(5)	99	81	98
SECRETARIES	111	99	102	114	101	91	89	100
STENOGRAPHERS	82	(5)	101	103	101	89	79	92
TYPISTS	105	96	110	119	104	98	85	99

[1] Each occupation includes the work levels shown in table 1. In computing relative salary levels for each occupation by industry division, the total employment in each work level in all industries surveyed as a constant employment weight to eliminate the effect of differences in the proportion of employment in various work levels within each occupation.

[2] For scope of study, see table A-1 in appendix A.

[3] Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

[4] Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, scientific, and research organizations.

[5] Insufficient employment in 1 work level or more to warrant separate presentation of data.

Table 9. Average weekly hours: Occupation by industry division

(Average standard weekly hours[1] for employees in selected professional, administrative, technical, and clerical occupations,[2] by industry division,[3] United States except Alaska and Hawaii, March 1983)

OCCUPATION AND LEVEL	MINING	CONSTRUCTION	MANUFACTURING	PUBLIC UTILITIES[4]	WHOLESALE TRADE	RETAIL TRADE	FINANCE, INSURANCE AND REAL ESTATE	SELECTED SERVICES[5]
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	40.0	40.0	40.0	39.5	39.5	39.5	38.0	39.5
AUDITORS	40.0	40.0	39.5	39.5	38.0	39.5	38.5	39.0
PUBLIC ACCOUNTANTS	-	-	-	-	-	-	-	39.5
CHIEF ACCOUNTANTS	(6)	(6)	39.5	(6)	(6)	(6)	38.5	39.5
ATTORNEYS	40.0	(6)	39.5	39.5	38.5	39.5	38.0	39.0
BUYERS	40.0	40.0	40.0	39.5	39.5	37.5	38.0	39.5
PROGRAMMERS/PROGRAMMER ANALYSTS	40.0	40.0	39.5	39.5	40.0	39.5	38.0	39.5
JOB ANALYSTS	(6)	40.0	39.5	39.5	(6)	(6)	38.0	39.0
DIRECTORS OF PERSONNEL	40.0	(6)	39.5	40.0	(6)	40.0	38.5	39.5
CHEMISTS	40.0	-	39.5	(6)	(6)	-	(6)	39.0
ENGINEERS	40.0	40.0	40.0	40.0	(6)	(6)	(6)	39.5
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	40.0	-	40.0	40.0	(6)	(6)	(6)	39.5
DRAFTERS	40.0	40.0	40.0	39.0	(6)	38.0	(6)	40.0
COMPUTER OPERATORS	40.0	(6)	39.5	39.0	39.5	(6)	38.5	39.5
PHOTOGRAPHERS	(6)	(6)	40.0	39.5	(6)	38.0	(6)	39.5
CLERICAL								
ACCOUNTING CLERKS	40.0	39.5	39.5	39.5	39.5	40.0	38.5	39.5
FILE CLERKS	40.0	40.0	39.5	39.5	39.0	39.5	38.0	38.5
KEY ENTRY OPERATORS	40.0	39.5	39.5	39.5	39.5	39.5	38.0	39.5
MESSENGERS	40.0	40.0	39.0	39.0	39.0	39.5	38.5	38.5
PERSONNEL CLERKS/ASSISTANTS	40.0	40.0	39.5	40.0	38.0	40.0	38.5	39.0
PURCHASING ASSISTANTS	40.0	(6)	40.0	40.0	(6)	39.5	38.0	39.5
SECRETARIES	40.0	40.0	39.5	39.5	39.0	39.0	38.0	39.5
STENOGRAPHERS	40.0	(6)	40.0	39.5	40.0	40.0	36.5	39.0
TYPISTS	40.0	40.0	39.5	39.5	39.0	39.5	38.0	39.0

[1] Based on the standard workweek for which employees receive their regular straight-time salary. If standard hours were not available, the standard hours applicable for a majority of the office work force in the establishment were used. The average for each job category was rounded to the nearest half hour.

[2] Each occupation includes the work levels shown in table 1.

[3] For scope of study, see table A-1 in appendix A.

[4] Transportation (except U.S Postal Service, communications, electric, gas, and sanitary services.

[5] Limited to engineering, architectural, and surveying services; commercially operated research, development, and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relations services; and noncommercial educational, scientific, and research organizations.

[6] Insufficient employment in 1 work level or more to warrant separate presentation of data.

Appendix A. Scope and Method of Survey

Scope

The survey relates to establishments[1] in the United States, except Alaska and Hawaii, employing at least a specified minimum of workers, and engaged in the following industries: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services (except the U.S. Postal Service and governmental agencies, such as the Tennessee Valley Authority); wholesale trade; retail trade; finance, insurance, and real estate; and selected services (table A-1). Establishments which employed fewer than the minimum number of employees specified for each industry division were excluded. Establishments which met the minimum size criteria during the reference period of the information used in compiling the survey universe were included even if they employed fewer than the specified minimum number of workers at the time of the survey. Establishments found to be outside of the industrial scope of the survey at the time of data collection were excluded.

Table A-1 shows the estimated number of establishments and employees within the scope of the survey (the universe) and the number within the sample actually studied for each major industry division. Separate estimates are presented for establishments employing 2,500 workers or more and for those located in Standard Metropolitan Statistical Areas (SMSA's).[2] Similar estimates of the number of full-time white-collar employees are also provided.

Sampling frame

The list of establishments (the sampling frame) from which the sample was selected was developed by updating the 1982 survey sampling frame using data from the most recently available (usually March 1981) unemployment insurance reports for the 48 contiguous States and the District of Columbia. During the update process, some establishments were added, some were removed, and for some, address, employment, type of industry, or other information was changed.

Survey design

The design for a survey of this nature includes methods of classifying individual establishments into homogeneous groups or strata, determining the size of the sample for each stratum, and selecting the sample of establishments for each stratum.[3]

Establishments within the scope of the 1983 survey were stratified by industry group and by total employment.

The sample size in a stratum was a function of the expected number of employees (based on previous surveys) in all professional, administrative, technical, and clerical occupations in the stratum. That is, the larger the expected number of employees in all surveyed occupations, the larger the sample in the stratum. Also, an upward adjustment was made to the sample size in those strata expected to have specified occupations which had relatively high sampling errors in previous surveys. (See "Relability of estimates" section for a discussion of sampling errors.)

Data collection

Data for the survey were obtained primarily by personal visits of the Bureau's field representatives to a nationwide sample of establishments. Collection was scheduled from January through mid-May to reflect an average reference period of March 1983.[4]

Employees were classified by occupation and work level using job descriptions (appendix C) prepared jointly by the Bureau of Labor Statistics and the Office of Personnel Management. Descriptions are designed to reflect duties and responsibilities of employees in private industry and to be translatable to specific General Schedule grades applying to Federal employees (appendix D). Thus, definitions of some occupations

[1] For this survey, an establishment is an economic unit which produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. In manufacturing industries, the establishment is usually a single physical location. In nonmanufacturing industries, all locations of an individual company within a Standard Metropolitan Statistical Area (SMSA) or within a nonmetropolitan county are usually considered an establishment.

[2] Metropolitan data relate to all 276 SMSA's within the 48 contiguous States as revised through June 1977 by the U.S. Office of Management and Budget.

[3] In 1983, a random sample was selected systematically to maximize the probability of retaining establishments which were selected for the 1982 survey. This method was a modification of the method introduced by Nathan Keyfitz in 1951 in his paper titled "Sampling with Probabilities Proportional to Size Adjusting for Changes in Probabilities," *Journal of the American Statistical Association*, No. 46, pp. 105-109.

[4] The March payroll period has been used since the 1972 survey. The 1970 and 1971 surveys had a June reference period.

and work levels were limited to specific elements which could be classified uniformly among establishments.

In comparing the actual duties and responsibilities of employees with those enumerated in job descriptions, the Bureau's field representatives, with the assistance of company officials, made extensive use of company position descriptions, organization charts, and other personnel records.

Salaries reported for survey occupations were those paid to full-time employees for standard work schedules, i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses were excluded, but cost-of-living payments and incentive earnings were included.

Survey nonresponse

In the March 1983 survey, salary data were not available from about 14 percent of the sample establishments (representing 3,243,000 employees in the total universe covered by the survey). An additional 4 percent of the sample establishments (representing 845,000 employees) were either out of business or outside the scope of the survey.

If data were not provided by the sample member, the weights of responding sample establishments from the same stratum were increased to adjust for the missing data. No adjustment was made for establishments which were out of business or outside the scope of the survey.

Some sampled companies had a policy of not disclosing salary data for certain employees. No adjustments were made to salary estimates for the survey as a result of these missing data. In all but three of the professional, administrative, technical, and clerical work levels published, the proportion of employees for whom salary data were not available was less than 5 percent.[5]

Survey estimation methods

Data conversion. Salary data were collected from company records in the most readily available form, i.e., weekly, biweekly, semimonthly, monthly, or annual. Before initial tabulations, all salary data were converted to a monthly basis. The factors used to convert the salary data are as follows:

Payroll basis	*Conversion factor*
Weekly	4.3333
Biweekly	2.1725
Semimonthly	2.0000
Monthly	1.0000
Annual	.0833

[5] Those with 5 percent or more were: Chief accountants IV, 9 percent; and directors of personnel III and IV, 15 and 18 percent, respectively.

Factors which reflect the normal work schedules for the month were used to convert hourly rates to a monthly basis.

Employment. Occupational employment counts generated by the survey are estimates of the total for all establishments within the scope of the survey and are not limited to establishments actually studied. An occupational employment estimate was derived by multiplying the full-time employment in the occupation in each sample establishment by the establishment weight and then summing these results.

Salary averages. The mean salary (average wage rate) for a specific occupational level was obtained by dividing total wages for that level by the corresponding total employment. Median and quartile values were derived from distributions of employees by salary using 10-cent-an-hour class intervals. All salary averages in the tables were rounded to the nearest dollar. For all annual salary calculations, indivdual monthly salaries (to the nearest one-tenth cent) were multiplied by 12 before performing the necessary data aggregation.

Salary trends. Percent increases for each occupation in text table 1 were obtained by adding the aggregate monthly salaries for each level in each of two successive years and dividing the later sum by the earlier sum. To eliminate the effects of year-to-year employment shifts in this computation, average salaries in each year were multiplied by employment in the most recent year.

Year-to-year percent increases for each group specified in text table 2 were determined by adding average monthly salaries for all occupational levels in the group for two consecutive years, and dividing the later sum by the earlier sum. The trends in text table 2 were obtained by linking changes for the individual period.

Changes in the scope of the survey and in occupational definitions were incorporated into the various trends series as soon as two consecutive periods with comparable data were available.

Limitations

Survey occupations were limited to employees meeting the specific criteria in each survey definition and were not intended to include all employees in each field of work.[6] Employees whose salary data were not available, as well as those for whom there was no

[6] Engineers, for example, include employees engaged in engineering work within a band of eight levels, starting with inexperienced engineering graduates and excluding only those within certain fields of specialization or in positions above those covered by level VIII. In contrast, occupations such as chief accountants and directors of personnel include only those with responsibility for a specified program and with duties and responsibilities as indicated for each of the more limited number of work levels selected for study.

satisfactory basis for classification by work level, were not taken into account in the estimates. For these reasons, and because of differences in occupational structure among establishments, estimates of occupational employment obtained from the sample of establishments studied indicate only the relative importance of occupations and levels as defined for the survey. These qualifications of employment estimates should not materially affect the accuracy of the earnings data.

Data on year-to-year changes in average salaries are subject to limitations which reflect the nature of the data collected. Changes in average salaries reflect not only general salary increases and merit or other increases in the same work level category, but also other factors such as employee turnover, expansions or contractions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum salary range for a work level, which would tend to lower the average; a reduction or a low turnover in the work force may have the opposite effect. Similarly, promotions of employees to higher work levels of professional and administrative occupations may affect the average of each level. Established salary ranges for such occupations are relatively wide, and employees who may have been paid the maximum of the salary scale for the lower level are likely to be replaced by less experienced employees who may be paid the minimum. Occupations most likely to reflect such changes are the higher levels of professional and administrative occupations and single-incumbent positions such as chief accountant and director of personnel.

Reliability of estimates

The statistics in the report are estimates derived from a sample survey. There are two types of errors possible in an estimate based on a sample survey—sampling and nonsampling.

Sampling errors occur because observations come only from a sample, not the entire population. The particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same sample design. Estimates derived from the different samples would differ from each other.

A measure of the variation among these differing estimates is called the standard error or sampling error.[7] It indicates the precision with which an estimate from a particular sample approximates the average result of all possible samples. The relative standard error (RSE) is the standard error divided by the value being estimated. The smaller the RSE, the greater the reliability of the estimate.

Estimates of relative standard errors for the 1983 survey vary among the occupational work levels depending on such factors as the frequency with which the job occurs, the dispersion of salaries for the job, and the survey design. For the 101 publishable work levels, estimated relative standard errors (RSE) for average salary estimates were distributed as follows:

Relative standard error	*Number of occupational work levels*
Less than 1 percent	42
1-2 percent	48
2-3 percent	10
3 percent or more	1

The Bureau evaluates the reliability of its estimates based in part on the value of two relative standard errors for an occupational level. For example, a 95-percent confidence interval[8] for accountants I (survey estimate = $1,627 monthly) is from $1,589 to $1,665.

Nonsampling errors can come from many sources, such as inability to obtain information from some establishments; definitional difficulties; inability to provide correct information by respondents; mistakes in recording or coding the data obtained; and other errors of collection, response, coverage, and estimation for missing data. Although not specifically measured, the survey's nonsampling errors are expected to be minimal due to the high response rate and the extensive and continous training of field representatives, careful screening of data at several levels of review, annual maintenance and evaluation of the suitability of job definitions, and thorough field testing of new or revised job definitions. (See appendix B.)

[7] A replication technique with 15 random groups was used to obtain estimates of relative standard errors for the 1983 survey.

[8] A 95-percent confidence interval means that, if all possible samples were selected and an estimate of the salary and its sampling error were computed for each, then for approximately 95 percent of the samples the interval from 2 standard errors below the estimate to 2 standard errors above the estimate would include the average salary of all possible samples. For accountants I, the two relative standard errors were 2.3 percent in 1983.

Table A-1. Number of establishments and workers within scope of survey and number studied, by industry division, United States, March 1983

Industry division[1]	Minimum employment in establishments within scope of survey	Number of establishments	Within scope of survey			Studied			
			Workers in establishments			Number of establishments	Workers in establishments		
			Total	Professional and administrative	Clerical and technical support		Total	Professional and administrative	Clerical and technical support
United States									
All industries[2]	–	44,339	21,905,315	5,074,490	5,040,343	3,147	5,597,016	1,505,700	1,362,336
Manufacturing	[3]100–250	20,112	11,064,938	2,399,563	1,816,284	1,392	2,928,840	770,147	459,017
Nonmanufacturing:									
Mining	250	729	411,745	118,773	74,019	69	83,874	32,009	20,787
Construction	250	761	304,655	76,441	38,728	37	57,304	21,548	11,861
Transportation, communication, electric, gas, and sanitary services	[4]100–250	4,277	2,779,278	603,581	670,276	342	1,079,086	259,177	311,074
Wholesale trade	100	5,035	1,005,349	284,305	289,984	259	74,385	24,947	25,264
Retail trade	250	3,820	3,020,555	337,270	692,328	266	607,237	92,475	159,310
Finance, insurance, and real estate	100	6,735	2,465,940	806,409	1,393,373	449	538,931	179,947	306,749
Selected services[5]	[6]50–100	2,920	852,855	448,148	265,351	333	227,359	125,450	66,274
Metropolitan areas[7]									
All industries	–	36,601	18,933,943	4,626,370	4,682,768	2,746	5,300,354	1,433,545	1,319,117
Manufacturing	[3]100–250	14,973	8,876,667	2,106,788	1,414,190	1,129	2,709,730	729,490	431,612
Nonmanufacturing:									
Mining	250	380	228,739	87,299	59,587	41	56,579	23,584	16,352
Construction	250	708	275,096	72,045	36,843	33	52,459	20,417	11,451
Transportation, communication, electric gas, and sanitary services	[4]100–250	3,171	2,462,707	549,427	615,907	297	1,054,050	254,502	307,106
Wholesale trade	100	4,518	932,196	267,635	281,109	241	71,995	24,399	24,989
Retail trade	250	3,674	2,945,166	325,452	667,754	258	601,986	91,559	157,568
Finance, insurance, and real estate	100	6,383	2,391,474	781,815	1,353,058	427	533,017	177,868	305,879
Selected services[5]	[6]50–100	2,794	821,896	433,909	254,320	320	220,538	121,926	64,380
Establishments employing 2,500 workers or more									
All industries	–	990	6,243,144	1,657,490	1,545,908	580	4,263,220	1,156,546	1,014,617
Manufacturing	–	395	3,140,043	885,942	528,794	306	2,351,073	641,262	388,254

[1] As defined in the 1972 edition of the *Standard Industrial Classification Manual*, U.S. Office of Management and Budget.

[2] Establishments with total employment at or above the minimum limitation indicated in the first column; excludes Alaska and Hawaii.

[3] Includes executive, administrative, professional, supervisory, and clerical employees, but excludes technicians, drafters, and sales personnel.

[4] Minimum employment size was 100 for chemical and allied products; petroleum refining and related industries; machinery, except electrical; electrical machinery, equipment, and supplies; transportation equipment; and instruments and related products. Minimum size was 250 in all other manufacturing industries.

[5] Minimum employment size was 100 for railroad transportation; local and suburban transit; deep sea foreign and domestic transportation; air transportation; communications, electric, gas, and sanitary services; and pipelines and 250 for all other transportation industries. U.S. Postal Service is excluded from the survey.

[6] Limited to engineering and architectural services; research and development and commercial testing laboratories; advertising; credit reporting and collection; management and public relations; and noncommercial research organizations.

[7] Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through October 1975 by the U.S. Office of Management and Budget.

Appendix B. Job Match Validation

A quality control procedure was added to the 1983 PATC survey to measure and better control nonsampling errors that occur during data collection, e.g., the ability of field representatives to properly match company jobs to survey job classifications. (See appendix A, p. 31.) The new procedure, job match validation (JMV), was designed to identify the frequency, reasons for, and sources of incorrect decisions made by Bureau field representatives in matching company jobs to survey job categories. Once identified, the problems (e.g., faulty interview techniques or complex job description) were discussed promptly with the field representatives while data were still being collected. Subsequently, the JMV results were tallied and reported to BLS staff and survey users. They will become the basis for remedial action at the annual training conferences on the survey.

For purposes of tabulating results, a sample of field representatives with various experience levels among the Bureau's eight regional offices was selected at the start of the JMV process. The "full participants" in JMV usually had one of their schedules (survey reporting forms) selected at random for a structured review every two weeks during the survey. Other field representatives received the same type of review but less frequently—once at the beginning and once near the end of data collection. The JMV process was in addition to the regular review to which all survey schedules are subject. Its structured procedure, however, enables the amount of mismatching in a random sample of schedules to be quantified.

A key feature of the JMV process was a telephone recontact with respondents by survey reviewers from the regional offices. During this reinterview, they checked questionable job matches, looked for valid job matches inadvertently omitted, validated a subsample of job matches that appeared to be correct, and attempted to determine, in consultation with the respondent, the reason for any job match errors that were found. The reviewers then conferred with the field representative involved to provide quick feedback on job match performance and to discuss possible reasons for, and sources of, discovered job match errors.

Tabulations of the JMV process showed that about 7 percent of the nearly 3,100 job match decisions checked with respondents were subsequently changed by survey reviewers. Of those revised (229), half were either original job matches that should have been excluded or company jobs excluded by the field representative that would have been matches for BLS occupational work levels. Most of the remaining errors were matching one work level too high or too low within the appropriate occupation, e.g., accountant IV instead of accountant III. Among survey occupations, about one-fourth of the uncovered job match errors related to accountants and about one-tenth or less to any of the other 23 occupations.

Three primary reasons were mentioned for job match errors: (1) The survey job description was not adequately discussed with respondents; (2) factors other than job duties, such as years of work experience, were used; and (3) exclusion of workers performing certain types of functions (e.g., accountants who primarily design accounting system) were not applied, or were misapplied. Primary sources of job match error commonly cited by field representatives were their lack of a procedure for analyzing the establishment's occupational and organizational structures preparatory to job matching; the lack of guidance in assessing the adequacy of job matches after the interview ends; vague delineation of duties and responsibilities between some levels of survey occupations; and insufficient emphasis on "exclusion" statements in survey definitions.

A comprehensive staff report on the JMV process will be prepared later this year. Present plans call for the process to be repeated in 1984, using data from a different sample of field representatives to tabulate results.

Appendix C. Occupational Definitions

The primary purpose of preparing job definitions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations, or levels within occupations, workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. To secure comparability of job content, some occupations and work levels are defined to include only those workers meeting specific criteria as to training, job functions, and responsibilities. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's occupational definitions may differ significantly from those in use in individual establishments or those prepared for other purposes.

Accountants and Auditors

ACCOUNTANT

Performs professional operating or cost accounting work requiring knowledge of the theory and practice of recording, classifying, examining, *and* analyzing the data and records of financial transactions. The work generally requires a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Positions covered by this definition are characterized by the inclusion of work that is analytical, creative, evaluative, and advisory in nature. The work *draws* upon and *requires* a thorough knowledge of the fundamental doctrines, theories, principles, and terminology of accountancy, and often entails some understanding of such related fields as business law, statistics, and general management. (See also chief accountant.)

Professional responsibilities in accountant positions above the entry and developmental levels include several such duties as:

Analyzing the effects of transactions upon account relationships;

Evaluating alternative means of treating transactions;

Planning the manner in which account structures should be developed or modified;

Assuring the adequacy of the accounting system as the basis for reporting to management;

Considering the need for new or changed controls;

Projecting accounting data to show the effects of proposed plans on capital investments, income, cash position, and overall financial condition;

Interpreting the meaning of accounting records, reports, and statements;

Advising operating officials on accounting matters; and

Recommending improvements, adaptations, or revisions in the accounting system and procedures.

(Entry and developmental level positions provide opportunity to develop ability to perform professional duties such as those enumerated above.)

In addition to such professional work, most accountants are also responsible for assuring the proper recording and documentation of transactions in the accounts. They, therefore, frequently direct nonprofessional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost or other comparable data, the preparation of standard reports and statements, and similar work. (Positions involving such supervisory work, but not including professional duties as described above, are not included in this description.)

Excluded are accountants whose *principal or sole* duties consist of designing or improving accounting systems or other nonoperating staff work, e.g., budget analysis, financial analysis, financial forecasting, tax advising, etc. (The criteria that follow for distinguishing among the several levels of work are inappropriate for such jobs.) Note, however, that professional accountant positions with responsibility for recording or reporting accounting data relative to taxes are included, as are other operating or cost accountants whose work includes, but is not limited to, improvement of the accounting system.

Some accountants use electronic data processing equipment to process, record, and report accounting data. In some such cases, the machine unit is a subordinate segment of the accounting system; in others, it is

a separate entity or is attached to some other organization. In either instance, provided that the primary responsibility of the position is professional accounting work of the type otherwise included, the use of data processing equipment of any type does not of itself exclude a position from the accountant description nor does it change its level.

Accountant I

General characteristics. At this beginning professional level, the accountant learns to apply the principles, theories, and concepts of accounting to a specific system. The position is distinguishable from nonprofessional positions by the variety of assignments; rate and scope of development expected of the incumbent; and the existence, implicit or explicit, of a planned training program designed to give the entering accountant practical experience. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced accountant whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Performs a variety of accounting tasks such as: Examining a variety of financial statements for completeness, internal accuracy, and conformance with uniform accounting classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements not involving problems of analysis or presentation; and preparing charts, tables, and other exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

Responsibility for direction of others. Usually none.

Accountant II

General characteristics. At this level, the accountant makes practical application of technical accounting practices and concepts beyond the mere application of detailed rules and instructions, as a phase in developing greater professional competence. Initial assignments are designed to expand practical experience and to develop professional judgment in the application of basic accounting techniques to simple problems. Is expected to be competent in the application of standard procedures and requirements to routine transactions, to raise questions about unusual or questionable items, and to suggest solutions. (Terminal positions are excluded.)

Direction received. Work is reviewed closely to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure professional growth. Progress is evaluated in terms of ability to apply professional knowledge to basic accounting problems in the day-to-day operations of an established accounting system.

Typical duties and responsibilities. Performs a variety of accounting tasks, e.g., prepares routine working papers, schedules, exhibits, and summaries indicating the extent of the examination and presenting and supporting findings and recommendations. Examines a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent policies and procedures, and are classified and recorded according to acceptable accounting standards.

Responsibility for direction of others. Usually none, although sometimes responsible for supervision of a few clerks.

Accountant III

General characteristics. The accountant, at this level, applies well-established accounting principles, theories, concepts, and practices to moderately difficult problems. Receives detailed instructions concerning the overall accounting system and its objectives, the policies and procedures under which it is operated, and the nature of changes in the system or its operation. Characteristically, the accounting system or assigned segment is stable and well established, (i.e., the basic chart of accounts, classifications, the nature of the cost accounting system, the report requirements, and the procedures are changed infrequently).

Depending upon the workload involved, the accountant may have such assignments as supervision of the *day-to-day operation* of: (a) The entire system of a relatively small establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of a somewhat larger system, or (c) in a complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

Direction received. A higher level professional account-

Errata for--

National Survey of
Professional, Administrative,
Technical, and Clerical Pay,
March 1983

Following is a missing page for the March 1983 National Survey bulletin. The missing page follows page 37 in Appendix C, Occupational Definitions.

ant normally is available to furnish advice and assistance as needed. Work is reviewed for technical accuracy, adequacy of professional judgment, and compliance with instructions through spot checks, appraisal of results, subsequent processing, analysis of reports and statements, and other appropriate means.

Typical duties and responsibilities. The primary responsibility of most positions at this level is to assure that the assigned day-to-day operations are carried out in accordance with established accounting principles, policies, and objectives. The accountant performs such professional work as: Developing nonstandard reports and statements (e.g., those containing cash forecasts reflecting the interrelations of accounting, cost budgeting, or comparable information); interpreting and pointing out trends or deviations from standards; projecting data into the future; predicting the effects of changes in operating programs; or identifying management informational needs, and refining account structures or reports accordingly.

Within the limits of delegated responsibility, makes day-to-day decisions concerning the accounting treatment of financial transactions. Is expected to recommend solutions to moderately difficult problems and propose changes in the accounting system for approval at higher levels. Such recommendations are derived from personal knowledge of the application of well-established principles and practices.

Responsibility for direction of others. In most instances is responsible for supervision of a subordinate nonprofessional staff; may coordinate the work of lower level professional accountants.

Accountant IV

General characteristics. At this level the accountant applies well-established accounting principles, theories, concepts, and practices to a wide variety of difficult problems. Receives instructions concerning the objectives and operation of the overall accounting system. Compared with level III, the accounting system or assigned segment is more complex, i.e., (a) is relatively unstable, (b) must adjust to new or changing company operations, (c) is substantially larger *or* (d) is complicated by the need to provide and coordinate separate or specialized accounting treatment and reporting (e.g., cost accounting using standard cost, process cost, and job order techniques) for different operations or divisions of company.

Depending upon the workload and degree of coordination involved, the accountant IV may have such assignments as the supervision of the *day-to-day operation* of: (a) The entire accounting system of an establishment having a few relatively stable accounting segments, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of an accounting system serving a larger and more complex establishment, or (c) in a complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

Direction received. A higher level accountant normally is available to furnish advice and assistance as needed. Work is reviewed by spot checks and appraisal of results for adequacy of professional judgment, compliance with instructions, and overall accuracy and quality.

Typical duties and responsibilities. As in level III, a primary characteristic of most positions at this level is the responsibility of operating an accounting system or major segment of a system in the intended manner.

The accountant IV exercises professional judgment in making frequent appropriate recommendations for: New accounts; revisions in the account structure; new types of ledgers; revisions in reporting system or subsidiary records; changes in instructions regarding the use of accounts, new or refined account classifications or definitions; etc. Also makes day-to-day decisions concerning the accounting treatment of financial transactions and is expected to recommend solutions to complex problems beyond incumbent's scope of responsibility.

Responsibility for direction of others. Accounting staff supervised, if any, may include professional accountants.

Accountant V

General characteristics. The accountant V applies accounting principles, theories, concepts, and practices to the solution of problems for which no clear precedent exists or performs work which is of greater than average responsibility due to the nature or magnitude of the assigned work. Responsibilities at this level, in contrast to accountants at level IV, extend beyond accounting system maintenance to the solution of more complex technical and managerial problems. Work of accountants V is more directly concernd with what the accounting system (or segment) should be, what operating policies and procedures should be established or revised, and what is the managerial as well as the accounting meaning of the data included in the reports and statements for which they are responsible. Typically this level of work approaches chief accountant positions in terms of the nature of the concern for the accounting system and its operation, but not in terms of the breadth or scope of responsibility.

Examples of assignments characteristic of this level are supervision of the *day-to-day operation* of: (a) The entire accounting system of an establishment having a few relatively complex accounting segments, or (b) a major segment of a larger and more complex accounting system, or (c) the entire accounting system (or major segment) of a company that has a relatively stable and conventional accounting system when the work includes significant responsibility for accounting systems design and development, or (d) in a complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

Direction received. An accountant of higher level normally is available to furnish advice and assistance as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions, and overall quality.

Typical duties and responsibilities. The accountant V performs such professional work as: Participating in the development and coordinating the implementation of new or revised accounting systems, and initiating necessary instructions and procedures; assuring accounting reporting systems and procedures are in compliance with established company policies, regulations, and acceptable accounting practices; providing technical advice and services to operating managers, interpreting accounting reports and statements, and identifying problem areas; evaluating completed assignments for conformance with applicable policies, regulations, and tax laws.

Responsibility for direction of others. Accounting staff supervised generally includes professional accountants.

Accountant VI

General characteristics. At this level the accountant applies accounting principles, theories, concepts, and practices to specialized, unique, or nonrecurring complex problems (e.g., implementation of specialized automated accounting systems). The work is substantially more difficult and of greater responsibility than level V because of the unusual nature, magnitude, importance, or overall impact of the work on the accounting program.

At this level the accounting system or segment is usually complex, i.e., (a) is generally unstable, (b) must adjust to the frequent changing needs of company operations, or (c) is complicated by the need to provide specialized or individualized reports.

Examples of assignments at this level are the supervision of the *day-to-day operation* of: (a) A large and complex corporate accounting system, or (b) a major segment (e.g., general accounting, property accounting, etc.) of an unusually complex accounting system requiring technical expertise in a particular accounting field (e.g., cost accounting, tax accounting, etc.).

Direction received. A higher level professional accountant is normally available to furnish advice as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions and policies, and overall quality.

Typical duties and responsibilities. Accountants at this level are delegated complete responsibility from higher authority to establish and implement new or revised accounting policies and procedures. Typically, accountants VI participate in decisionmaking sessions with operating managers who have policymaking authority for their subordinate organizations or establishments; recommend management actions or alternatives which can be taken when accounting data disclose unfavorable trends, situations, or deviations; and assist management officials in applying financial data and information to the solution of administrative and operating problems.

Responsibility for direction of others. Accounting staff supervised generally includes professional accountants.

NOTE: Excluded are accountnts above level VI whose principal function is to direct, manage, or administer an accounting program in that they are *primarily* concerned with the administrative, budgetary, and policy matters of the program rather than the actual supervision of the *day-to-day operations* of an accounting program. This type of work requires extensive managerial ability as well as superior professional competence in order to cope with the technical accounting and management problems encountered. Typically this level of work involves responsibility for more than one accounting activity (e.g., cost accounting, sales accounting, etc.).

CHIEF ACCOUNTANT

As the top technical expert in accounting, is responsible for directing the accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); *and* (2) at least one other *major* accounting activity, typically tax accounting, cost accounting, property accounting, or sales accounting. It may also include such other activities as payroll and timekeeping, and mechanical or electronic data processing operations which are an adjunct of the accounting

Table C-1. Criteria for matching chief accountants by level

Level	Authority and responsibility[1]	Technical complexity[1]	Subordinate professional accounting staff
I	AR-1	TC-1	Only one or two professional accountants who do not exceed the accountant III job definition.
II	AR-1	TC-2	About 5 to 10 professional accountants, with at least one or two matching the accountant IV job definition.
	or		
	AR-2	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match the accountant IV job definition.
	or		
	AR-3	TC-1	Only one or two professional accountants who do not exceed the accountant IV job definition.
III	AR-1	TC-3	About 15 to 20 professional accountants. At least one or two match the accountant V job definition.
	or		
	AR-2	TC-2	About 15 to 20 professional accountants. Many of these match the accountant IV job definition, but some may match the accountant V job definition.
	or		
	AR-3	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match as high as accountant V.
IV	AR-2	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.
	or		
	AR-3	TC-2	About 15 to 20 professional accountants. Most of these match the accountant IV job definition, but several may match the accountant V and one or two may exceed that level.
V	AR-3	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.

[1] AR-1, -2, -3, and TC-1, -2, and -3 are explained in the text.

system. (Responsibility for an internal audit program is typically *not* included.)

The responsibilities of the chief accountant include *all* of the following:

1. On own responsibility, developing, adapting, or revising an accounting system to meet the needs of the organization;
2. Supervising, either directly or through subordinate supervisors, the operation of the system with full management responsibility for the quality and quantity of work performed, training and development of subordinates, work scheduling and review, coordination with other parts of the organization served, etc.;
3. Providing directly, or through an official such as a comptroller, advisory services to the top management officials of the organization served as to:
   a. The status of financial resources and the financial trends or results of operations as revealed by accounting data, and selecting a manner of presentation that is meaningful to management;
   b. Methods for improving operations as suggested by an expert knowledge of accounting, e.g., proposals for improving cost control, property management, credit and collection, tax reduction, or similar programs.

Excluded are positions with responsibility for the accounting program if they also include (as a major part of the job) responsibility for budgeting; work measurement; organization, methods, and procedures studies; or similar nonaccounting functions. (Positions of such breadth are sometimes titled comptroller, budget and accounting manager, financial manager, etc.)

Some positions responsible for supervising general accounting and one or more other major accounting activities but which do *not* fully meet *all* of the respon-

sibilities of a chief accountant specified above may be covered by the descriptions for accountant.

Chief accountant jobs which meet the characteristics described are classified by level of work[1] according to (a) authority and responsibility and (b) technical complexity, using table C-1.

Authority and Responsibility

AR-1. The accounting system (i.e., accounts, procedures, and reports to be used) has been prescribed in considerable detail by higher levels in the company or organization. The chief accountant has final, unreviewed authority, within the prescribed system, to expand it to fit the particular needs of the organization served, e.g., in the following or comparable ways:

Providing greater detail in accounts and reports or financial statements;

Establishing additional accounting controls, accounts, subaccounts, and subsidiary records; and

Providing special or interim reports and statements needed by the manager responsible for the *day-to-day operations* of the organization served.

This degree of authority is typically found at a plant or similar subordinate establishment.

AR-2. The basic accounting system is prescribed in broad outline rather than in specific detail. While certain major financial reports, overall accounts, and general policies are required by the basic system, the chief accountant has broad latitude and *authority* to decide the specific methods, procedures, accounts, reports, etc., to be used within the organizational segment served. Approval must be secured from higher levels only for those changes which would basically affect the broad requirements prescribed by such higher levels. Typical responsibilities include:

Evaluating and taking final action on recommendations proposed by subordinate establishments for changes in aspects of the accounting system or activities not prescribed by higher authority;

Extending cost accounting operations to areas not previously covered;

Instituting new cost accounting procedures;

Expanding the utilization of computers within the accounting process; and

Preparing accounting reports and statements reflecting the events and progress of the entire organization for which incumbent is responsible, often consolidating data submitted by subordinate segments.

This degree of authority is most typically found at intermediate organizational levels such as regional offices, or division or subsidiary headquarters. It is also found in some company level situations where the authority of the chief accountant is less extensive than is described in AR-3. More rarely it is found in plant level chief accountants who have been delegated more authority than usual for such positions as described in AR-1.

AR-3. Has complete responsibility for establishing and maintaining the framework for the basic accounting system used in the company, subject only to general policy guidance and control from a higher level company official responsible for general financial management. Typical responsibilities include:

Determining the basic characteristics of the company's accounting system and the specific accounts to be used;

Devising and preparing accounting reports and statements required to meet management's needs for data;

Establishing basic accounting policies, interpretations, and procedures;

Reviewing and taking action on proposed revisions to the company's accounting system suggested by subordinate units; and

Taking final action on all technical accounting matters.

Characteristically, participates extensively in broad company management processes by providing accounting advice, interpretations, or recommendations based on data accumulated in the accounting system and on professional judgment and experience.

Technical Complexity

TC-1. The organization which the accounting program serves has relatively few functions, products, work processes, etc., and these tend to be stable and unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

TC-2. The organization which the accounting program serves has a relatively large number of functions, products, work processes, etc., which require substantial and frequent adaptations of the basic system to meet management needs (e.g., adoption of new accounts, subaccounts, and subsidiary records; revision of instructions for the use of accounts; improvement or expansion of methods for accumulating and reporting cost data in connection with new or changed work processes).

TC-3. The organization which the accounting program serves puts a *heavy demand on the accounting organization for specialized and extensive adaptations* of the basic system to meet management needs. Such demands arise because the functions, products, work processes,

[1] Insufficient data were obtained for level V to warrant presentation of average salaries.

etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

Provide for the solution of problems for which no clear precedents exist; or

Provide for the development or extension of accounting theories and practices to deal with problems to which these theories and practices have not previously been applied.

Subordinate Staff

In table C-1, the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various levels. It is to be considered less important in the matching process than the other criteria. In addition to the staff of professional accountants in the system for which the chief accountant is responsible, there are clerical, machine operation, bookkeeping, and related personnel.

AUDITOR

Performs professional auditing work requiring a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Audits the financial records and practices of a company, or of divisions or components of the company, to appraise systematically and verify the accounting accuracy of records and reports and to assure the consistent application of accepted accounting principles. Evaluates the adequacy of the accounting system and internal financial controls. Makes appropriate recommendations for improvement as necessary. To the extent determined necessary, examines the transactions entering into the balance sheet, and the transactions entering into income, expense, and cost accounts. Determines:

1. The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities.
2. The accuracy of financial statements or reports and the fairness of presentation of facts therein.
3. The propriety or legality of transactions.
4. The degree of compliance with established policies and procedures concerning financial transactions.

Excluded from this definition are:

a. Auditors primarily examining or reporting on the financial management of company operations. These auditors evaluate such matters as: (1) The operation's degree of compliance with the principles of sound financial management; and (2) the effectiveness of management and operating controls.

b. Auditors assigned to audit programs which are confined on a relatively permanent basis to repetitive examination of a limited area of company operations and accounting processes, e.g., accounts payable and receivable; payroll; physical inventory; and branch offices which do not have complete accounting systems. This does not preclude positions responsible for performing a segment of an audit (i.e., examining individual items on a balance sheet, rather than the entire balance sheet), *as long as the work directly relates to the financial audit program;* and

c. EDP auditors. These positions require an extensive knowledge of computer systems, programming, etc.

Auditor I

General characteristics. As a trainee auditor at the entering professional level, performs a variety of routine assignments. Typically, the trainee is rotated through a variety of tasks under a planned training program designed to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced auditor whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Assists in making audits by performing such tasks as: Verification of the accuracy of the balances in various records; examination of a variety of types of documents and vouchers for accuracy of computations; checking transactions to assure they are properly documented and have been recorded in accordance with correct accounting classifications; verifying the count of inventories; preparing detailed statements, schedules, and standard audit working papers; counting cash and other assets; preparing simple reconciliations and similar functions.

Auditor II

General characteristics. At this level the professional auditor serves as a junior member of an audit team, independently performing selected portions of the audit which are limited in scope and complexity, as a phase in developing greater professional competence. Auditors at this level typically have acquired knowledge of company operations, policies, and procedures. (Terminal positions are excluded.)

Direction received. Detailed instructions are furnished and the work is reviewed to the extent necessary to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure the auditor's professional growth. Any technical problems

not covered by instructions are brought to the attention of a superior. Progress is evaluated in terms of ability to apply professional knowledge to basic auditing situations.

Typical duties and responsibilities. Applies knowledge of *accounting theory* and audit practices to a variety of relatively simple professional problems in audit assignments, including such tasks as: The verification of reports against source accounts and records to determine their reliability; reconciliation of bank and other accounts and verifying the detail of recorded transactions; detailed examinations of cash receipts and disbursement vouchers, payroll records, requisitions, work orders, receiving reports, and other accounting documents to ascertain that transactions are properly supported and are recorded correctly from an accounting or regulatory standpoint; or preparing working papers, schedules, and summaries.

Auditor III

General characteristics. Work at this level consists of the audit of operations and accounting processes that are relatively stable, well-established, and typical of the industry. The audits primarily involve the collection and analysis of readily available findings; there is previous audit experience that is directly applicable; the audit reports are normally prepared in a prescribed format using a standard method of presentation; and few, if any, major problems are anticipated. The work performed requires the *application* of substantial knowledge of accounting principles and practices, e.g., bases for distinguishing among capital maintenance and operating expenses; accruing reserves for taxes; and other accounting considerations of an equivalent nature.

Direction received. Work is normally within an established audit program and supervision is provided by a higher level auditor who outlines and discusses assignments. Work is spot-checked in progress. Completed assignments are reviewed for adequacy of coverage, soundness of judgment, compliance with professional standards, and adherence to policies.

Typical duties and responsibilities. The auditor examines transactions and verifies accounts; observes and evaluates accounting procedures and internal controls; prepares audit working papers and submits an audit report in the required pattern containing recommendations for needed changes or improvements. Usually is responsible for selecting the detailed audit methods to follow, choosing the audit sample and its size, determining the extent to which discrepancies need to be investigated, and deciding the depth of the analyses required to support reported findings and conclusions.

Examples of assignments involving work at this level:

1. As a team leader or working alone, independently conducts audits of the complete accounts and related operations of smaller or less complex companies (e.g., involving a centralized accounting system with few or no subordinate, subsidiary, or branch accounting records) or of comparable segments of larger companies.
2. As a member of an audit team, independently accomplishes varied audit assignments of the above described characteristics, typically major segments of complete audits, or assignments otherwise limited in scope, of larger and more complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized *systems* integrated with the general accounting system).

Illustrative of such assignments are the audit and initial review of the accounting treatment and validity of reporting of overhead expenses in a large manufacturing or maintenance organization (e.g., major repair yard of a railroad); or the checking, verification, and balancing of all accounts receivable and accounts payable; or the analysis and verification of assets and reserves; or the inspection and evaluation of account controls and procedures.

Auditor IV

General characteristics. Auditors at this level are experienced professionals who apply thorough knowledge of accounting principles and theory in connection with a *variety* of audits. Work at this level is characterized by the audit of organizations and accounting processes which are complex and difficult because of such factors as: Presence of new or changed programs and accounting systems; existence of major specialized accounting functions (e.g., cost accounting, inventory accounting, sales accounting), in addition to general accounting; need to consider extensive and complicated regulatory requirements; lack of or difficulty in obtaining information; and other similar factors. Typically, a variety of different assignments are encountered over a period of time, e.g., one year. The audit reports prepared are comprehensive, explain irregularities, cite rules and regulations violated, recommend remedial actions, and contain analyses of items of special importance or interest to company management.

Direction received. Within an established audit program, has responsibility for independently planning and executing audits. Unusually difficult problems are discussed with the supervisor who also reviews completed assignments for adherence to principles and standards and the soundness of conclusions.

Typical duties and responsibilities. Auditors at this level have full responsibility for planning the audit, including determination of the aspects to emphasize, methods to be used, development of nonstandard or specialized audit aids, such as questionnaires, etc., *where previous audit experience and plans are of limited applicability.*

Included in the scope of work that characterizes this level are such functions as: Evaluation of methods used for determining depreciation rates of equipment; evaluation of assets where original costs are unknown; evaluation of the reliability of accounting and reporting systems; analysis of cost accounting systems and cost reports to evaluate the basis for cost and price setting; evaluation of accounting procurement and supply management records, controls, and procedures; and many others.

Examples of assignments involving work at this level:

1. As a team leader or working alone, independently plans and conducts audits of the complete accounts and related operations of relatively large complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized accounting *systems* integrated with the general accounting system) or of company branch, subsidiary, or affiliated organizations which are individually of comparable size and complexity.
2. As a member of an audit team independently plans and accomplishes audit assignments that constitute major segments of audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves.

NOTE: Excluded from level IV are auditors who, as team leaders or working alone, conduct *complete* audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves; or are team members assigned to major segments of audits of even larger or more complex organizations. Also excluded are positions primarily responsible for overseeing multiple concurrent audits.

PUBLIC ACCOUNTANT

Performs professional auditing work in a public accounting firm. Work requires at least a bachelor's degree in accounting. Participates in or conducts audits to ascertain the fairness of financial representations made by client companies. May also assist the client in improving accounting procedures and operations.

Examines financial reports, accounting records, and related documents and practices of clients. Determines whether all important matters have been disclosed and whether procedures are consistent and conform to acceptable practices. Samples and tests transactions, internal controls, and other elements of the accounting system(s) as needed to render the accounting firm's final written opinion.

Excluded are positions which do not require full professional accounting training. Also excluded are specialist positions in tax or management advisory services.

Public Accountant I

General characteristics. As an entry level public accountant, serves as a junior member of an audit team. Receives classroom and on-the-job training to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Positions held by trainee public accountants with advanced degrees, such as MBA's, are excluded at this level.)

Direction received. Complete instructions are furnished and work is reviewed to verify its accuracy, conformance with required procedures and instructions, and usefulness in facilitating the accountant's professional growth. Any technical problems not covered by instructions are brought to the attention of a superior.

Typical duties and responsibilities. Carries out basic audit tests and procedures, such as: Verifying reports against source accounts and records; reconciling bank and other accounts; and examining cash receipts and disbursements, payroll records, requisitions, receiving reports, and other accounting documents in detail to ascertain that transactions are properly supported and recorded. Prepares selected portions of audit working papers.

Public Accountant II

General characteristics. At this level, the public accountant carries out routine audit functions and detail work with relative independence. Serves as a member of an audit team on assignments planned to provide exposure to a variety of client organizations and audit situations. Specific assignments depend upon the difficulty and complexity of the audit and whether the client has been previously audited by the firm. On moderately complex audits where there is previous audit experience by the firm, accomplishes complete segments of the audit (i.e., functional work areas such as cash, receivables, etc.). When assigned to more complicated audits, carries out activities similar to public accountant I.

Direction received. Works under the supervision of a higher level public accountant who provides instructions and continuing direction as necessary. Work is spot checked in progress and reviewed upon completion to

determine the adequacy of procedures, soundness of judgment, compliance with professional standards, and adherence to clearly established methods and techniques. All interpretations are subject to close professional review.

Typical duties and responsibilities. Carries out a variety of sampling and testing procedures in accordance with the prescribed audit program, including the examination of transactions and verification of accounts, the analysis and evaluation of accounting practices and internal controls, and other detail work. Prepares a share of the audit working papers and participates in drafting reports. In moderately complex audits, may assist in selecting appropriate tests, samples, and methods commonly applied by the firm and may serve as primary assistant to the accountant in charge. In more complicated audits concentrates on detail work. Occasionally may be in charge of small, uncomplicated audits which require only one or two other subordinate accountants. Personal contacts usually involve only the exchange of factual technical information and are usually limited to the client's operating accounting staff and department heads.

Public Accountant III

General characteristics. At this level the public accountantant is in charge of a complete audit and may lead a team of several subordinates. Audits are usually accomplished one at a time and are typically carried out at a single location. The firms audited are typically moderately complex and there is usually previous audit experience by the firm. The audit conforms to standard procedural guidelines, but is often tailored to fit the client's business activities. Routine procedures and techniques are sometimes inadequate and require adaptation. Necessary data are not always readily available. When assigned to more difficult and complex audits (see level IV), the accountant may run the audit of a major component or serve as the primary assistant to the accountant in charge.

Direction received. Works under the general supervision of a higher level public accountant who oversees the operation of the audit. Work is performed independently, applying generally accepted accounting principles and auditing standards, but assistance on difficult technical matters is available. Work may be checked occasionally during progress for appropriateness and adherence to time requirements, but routine analyses, methods, techniques, and procedures applied at the work site are expected to be correct.

Typical duties and responsibilities. Is responsible for carrying out the technical features of the audit, leading team members and personally performing the most difficult work. Carries out field work in accordance with the general format prescribed in the audit program, but selects specific methods and types and sizes of samples and tests. Assigns work to team members, furnishes guidance, and adjusts workloads to accommodate daily priorities. Thoroughly reviews work performed for technical accuracy and adequacy. Resolves anticipated problems within established guidelines and priorities but refers problems of unusual difficulty to superiors for discussion and advice. Drafts financial statements, final reports, management letters, and other closing memoranda. Discusses significant recommendations with superiors and may serve as technical resource at "closing" meetings with clients. Personal contacts are usually with chief accountants and assistant controllers of medium size companies and divisions of large corporations to explain and interpret policies and procedures governing the audit process.

Public Accountant IV

General characteristics. At this level the public accountant directs field work including difficult audits, e.g., those involving initial audits of new clients, acquisitions, or stock registrations—and may oversee a large audit team split between several locations. The audit team usually includes one or more level III public accountants who handle major components of the audit. The audits are complex and clients typically include those engaged in projects which span accounting periods; highly regulated industries which have various external reporting requirements; publicly held corporations; or businesses with very high dollar or transaction volume. Clients are frequently large with a variety of operations which may have different accounting systems. Guidelines may be general or lacking and audit programs are intricate, often requiring extensive tailoring to meet atypical or novel situations.

Direction received. Works under general supervision. The supervisor sets overall objectives and resource limits but relies on the accountant to fully plan and direct all technical phases of the audit. Issues not covered by guidelines or known precedents are discussed with the supervisor, but the accountant's recommended approaches and courses of action are normally approved. Work is reviewed for soundness of approach, completeness, and conformance with established policies of the firm.

Typical duties and responsibilities. Is responsible for carrying out the operational and technical features of the audit, directing the work of team members, and personally performing the most difficult work. Often participates in the development of the audit scope, and

drafts complicated audit programs with a large number of concurrently executed phases. Independently develops audit steps and detailed procedures, deviating from traditional methods to the extent required. Makes program adjustments as necessary once an audit has begun; selects specific methods, types, and sizes of samples, the extent to which discrepancies need to be investigated, and the depth of required analyses. Resolves most operatinal difficulties and unanticipated problems.

Assigns work to team members; reviews work for appropriateness, conformance to time requirements, and adherence to generally accepted accounting principles and auditing standards. Consolidates working papers, draft reports, and findings; and prepares financial statements, management letters, and other closing memoranda for management approval. Participates in "closing" meetings as a technical resource and may be called upon to sell or defend controversial and critical observations and recommendations. Personal contacts are extensive and typically include top executives of smaller clients and mid- to upper-level financial and management officers of large corporations, e.g., assistant controllers or controllers. Such contacts involve coordinating and advising on work efforts and resolving operating problems.

NOTE: Excluded from this level are public accountants who direct field work associated with the complete range of audits undertaken by the firm, lead the largest and most difficult audits, and who frequently oversee teams performing concurrent audits. This type of work requires extensive knowledge of one or more industries to make subjective determinations on questions of tax, law, accounting, and business practices. Audits may be complicated by such factors as: The size and diversity of the client organizations (e.g., multinational corporations and conglomerates with a large number of separate and distinct subsidiaries); accounting issues where precedents are lacking or in conflict; and, in some cases, clients who are encountering substantial financial difficulties. They perform most work without technical supervision, and completed audits are reviewed mainly for propriety of recommendations and conformance with general policies of the firm. Also excluded are public accontants whose principal function is to manage, rather than perform accounting work, and the equity owners of the firm who have final approval authority.

Personnel Management

JOB ANALYST

Performs work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating employees in a fair, equitable, and uniform manner. Performs such duties as studying and analyzing jobs and preparing descriptions of duties and responsibilities and of the physical and mental requirements needed by workers; evaluating jobs and determining appropriate wage or salary levels in accordance with their difficulty and responsibility, independently conducting or participating with representatives of other companies in conducting compensation surveys within a locality or labor market area; assisting in administering merit rating programs; reviewing changes in wages and salaries indicated by surveys and recommending changes in pay scales; and auditing individual jobs to check the propriety of evaluations and to apply current job classifications.

Excluded are:

a. Positions also responsible for supplying management with a high technical level of advice regarding solution of broad personnel management problems;
b. Positions not requiring: (1) Three years of administrative, technical, or substantive clerical experience; (2) a bachelor's degree in any field; or (3) any equivalent combination of experience and education yielding basic skills in problem analysis and communication.

Job Analyst I

As a trainee, performs work in designated areas and of limited occupational scope. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.

Job Analyst II

Studies, describes, and evaluates jobs in accordance with established procedures. Is usually assigned to the simpler kinds of both wage and salaried jobs in the establishment. Works independently on such assignments but is limited by defined areas of assignment and instructions of superior.

Job Analyst III

Analyzes and evaluates a variety of wage and salaried jobs in accordance with established evaluation systems and procedures. May conduct wage surveys within the locality or participate in conducting surveys of broad compensation areas. May assist in developing survey methods and plans. Receives general supervision but responsibility for final action is limited.

Job Analyst IV

Analyzes and evaluates a variety of jobs in accord-

ance with established evaluation systems and procedures, and is given assignments which regularly include responsibility for the more difficult kinds of jobs. ("More difficult" means jobs which consists of hard-to-understand work processes; e.g., professional, scientific, administrative, or technical; *or* jobs in new or emerging occupational fields; *or* jobs which are being established as part of the creation of new organizations; *or* where other special considerations of these types apply.) Receives general supervision, but responsibility for final action is limited. May participate in the development and installation of evaluation or compensation systems, which may include those for merit rating programs. May plan survey methods and conduct or direct wage surveys within a broad compensation area.

DIRECTOR OF PERSONNEL

Directs a personnel management program for a company or a segment of a company. Serves top management officials of the organization as the source of advice and assistance on personnel management matters and problems generally; is typically consulted on the personnel implications of planned changes in management policy or program, the effects on the organization of economic or market trends, product or production method changes, etc.; represents management in contacts with other companies, trade associations, government agencies, etc., dealing primarily with personnel management matters.

Typically the director of personnel for a company reports to a company officer in charge of industrial relations and personnel management activities or an officer of similar level. Below the company level the director of personnel typically reports to a company officer or a high management offical who has responsibility for the operation of a plant, establishment, or other segment of the company.

For a job to be covered by this definition, the personnel management program *must include* responsibility for *all three* of the following functions:

1. *Administering a job evaluation system:* i.e., a system in which there are established procedures by which jobs are analyzed and evaluated on the basis of their duties, responsibilities, and qualification requirements in order to provide a foundation for equitable compensation. Typically, such a system includes the use of one or more sets of job evaluation factors and the preparation of formal job descriptions. It *may* also include such related functions as wage and salary surveys or merit rating system administration. The job evaluation system(s) does not necessarily cover all jobs in the organization, but does cover a substantial portion of the organization.
2. *Employment and placement function:* i.e., recruiting actively for at least some kinds of workers through a variety of sources (e.g., schools or colleges, employment agencies, professional societies, etc.); evaluating applicants against demands of particular jobs by use of such techniques as job analysis to determine requirements, interviews, written tests of

Table C-2. Criteria for matching directors of personnel by level

Number of employees in work force serviced	"Operations level" personnel program[1]		Number of employees in work force serviced	"Development level" personnel program[2]	
	"Type A" organization serviced[3]	"Type B" organization serviced[4]		"Type A" organization serviced[3]	"Type B" organization serviced[4]
250–750	I	II	250–750	II	III
1,000–5,000	II	III	1,000–5,000	III	IV
6,000–12,000	III	IV	6,000–12,000	IV	V
15,000–25,000	IV	V	15,000–25,000	V	-

[1] "Operations level" personnel program—director of personnel servicing an organizational segment (e.g., a plant) of a company, where the basic personnel program policies, plans, objectives, etc., are established at company headquarters or at some other higher level between the plant and the company headquarters level. The personnel director's responsibility is to put these into operation at the local level, in such a manner as to most effectively serve the local management needs.

[2] "Development level" personnel program—either:

(a) Director of personnel servicing an entire company (with or without subordinate establishments) where the personnel director plays an important role in establishment of basic personnel policies, plans, objectives, etc., for the company subject to policy direction and control from company officers; or (b) director of personnel servicing an intermediate organization below the company level, e.g., a division or a subsidiary to which a relatively complete delegation of personnel program planning and development responsibility is made. In this situation, only basic policy direction is given by the parent company and local officers. The director of personnel has essentially the same degree of latitude and responsibility for basic personnel policies, plans objectives, etc., as described above in (a).

[3] "Type A" organization serviced—most jobs serviced do not present particularly difficult or unusual recruitment, job evaluation, or training problems because the jobs consist of relatively easy-to-understand work processes, and an adequate labor supply is available. These conditions are most likely to be found in organizations in which the work force and organizational structure are relatively stable.

[4] "Type B" organization serviced—a substantial proportion of the jobs present difficult recruitment, job evaluation, or training problems because the jobs: Consist of hard-to-understand work processes (e.g., professional, scientific, administrative, or technical); have hard-to-match skill requirements; are in new or emerging occupations; or are extremely hard to fill. These conditions are most likely to be found in organizations in which the work force, organizational structure, work processes or functions, etc., are complicated or unstable.

NOTE: There are gaps between different degrees of all three elements used to determine job level matches. These gaps have been provided purposely to allow room for judgment in getting the best overall job level match for each job. Thus, a job which services a work force of 850 employees should be matched with level II if it is a personnel program operations level job where the nature of the organization serviced seems to fall slightly below the definition for type B. However, the same job should be matched with level I if the nature of the organization serviced clearly falls will within the definition for type A.

aptitude, knowledge, or skill, reference checks, experience evaluations, etc.; recommending selections and job placements to management, etc.

3. *Employee relations and services function:* i.e., functions designed to maintain employees' morale and productivity at a high level (e.g., administering a formal or informal grievance procedure, identifying and recommending solutions for personnel problems such as absenteeism, high turnover, low productivity, etc.; administration of beneficial suggestions system, retirement, pension, or insurance plans, merit rating system, etc.; overseeing cafeteria operations, recreational programs, industrial health and safety programs, etc.).

In addition, positions covered by this definition may, but do not necessarily, include responsibilities in the following areas:

a. *Employee training and development;*

b. *Labor relations activities* which are confined mainly to the administration, interpretation, and application of those aspects of labor union contracts that are essentially of the type described under (3) above. May also participate in bargaining of a subordinate nature, e.g., to negotiate detailed settlement of such matters as specific rates, job classifications, work rules, hiring or layoff procedures, etc., within the broad terms of a general agreement reached at higher levels, or to supply advice and information on technical points to the company's principal representative;

c. *Equal Employment Opportunity (EEO);*

d. *Reporting under the Occupational Safety and Health Act (OSHA).*

Excluded are positions in which responsibility for actual contract negotiation with labor unions as the principal company representative is a significant aspect of the job, i.e., a responsibility which serves as a primary basis for qualification requirements and compensation.

Director of personnel jobs which meet the above definition are classified by level of work[3] in accordance with the criteria shown in table C-2.

Attorneys

ATTORNEY

Performs consultation and advisory work and carries out the legal processes necessary to effect the rights, privileges, and obligations of the company. The work performed requires completion of law school with an LL.B. degree (or the equivalent) and admission to the bar. *Responsibilities or functions include one or more of the following or comparable duties:*

Preparing and reviewing various legal instruments and documents, such as contracts, leases, licenses, purchases, sales, real estate, etc.;

Acting as agent of the company in its transactions;

Examining material (e.g., advertisements, publications, etc.) for legal implications; advising officials of proposed legislation which might affect the company;

Applying for patents, copyrights, or registration of company's products, processes, devices, and trademarks;

Advising whether to initiate or defend lawsuits;

Conducting pre-trial preparations; defending the company in lawsuits; and

Advising officials on tax matters, government regulations, and/or corporate rights.

Excluded from this definition are:

Patent work which requires professional training in addition to legal training (typically a degree in engineering or in a science);

Claims examining, claims investigating, or similar *work for which professional legal training and bar membership is not essential;*

Attorneys, frequently titled "general counsel" (and their immediate full associates or deputies), who serve as company officers or the equivalent and are responsible for participating in the overall management and formulation of policy for the company in addition to directing its legal work. (The duties and responsibilities of such positions exceed level VI as described below.)

Attorney jobs which meet the above definition are to be classified in accordance with table C-3 and the definitions which follow.

Difficulty

D-1. Legal questions are characterized by: Facts that are well established; clearly applicable legal precedents; *and* matters not of substantial importance to the organization. (Usually relatively limited sums of money, e.g., a few thousand dollars, are involved.)

Examples of D-1 Work:

Legal investigation, negotiation, and research preparatory to defending the organization in potential or actual lawsuits involving alleged negligence where the facts can be firmly established and there are precedent cases directly applicable to the situation.

Searching case reports, legal documents, periodicals, textbooks, and other legal references, and preparing draft

[3] Insufficient data were obtained for level V to warrant presentation of average salaries.

Table C-3. Criteria for matching attorneys by level

Level	Difficulty of legal work[1]	Responsibility of job[1]	Experience required
I	This is the entry level. The duties and responsibilities after initial orientation and training are those described in D-1 and R-1.		Completion of law school with an LL.B. or J.D. degree plus admission to the bar.
II	D-1	R-2	Sufficient professional experience (at least 1 year, usually more) at the "D-1" level to assure competence as an attorney.
	or		
	D-2	R-1	
III	D-2	R-2	At least 1 year, usually more, of professional experience at the "D-2" level.
	or		
	D-3	R-1	
IV	D-2	R-3	Extensive professional experience at the "D-2" or higher level.
	or		
	D-3	R-2	
V	D-3	R-3	Extensive professional experience at the "D-3" level.
VI	D-3	R-4	Extensive professional experience at the "D-3" and "R-3" levels.

[1] D-1, -2, -3, and R-1, -2, -3, and -4 are explained in the text.

opinions on employee compensation or benefit questions when there is a substantial amount of clearly applicable statutory, regulatory, and case material.

Drawing up contracts and other legal documents in connection with real property transactions requiring the development of detailed information but *not* involving serious questions regarding titles to property or other major factual or legal issues.

D-2. Legal work is regularly difficult by reason of one or more of the following: The absence of clear and directly applicable legal precedents; the different possible interpretations that can be placed on the facts, the laws, or the precedents involved; the substantial importance of the legal matters to the organization (e.g., sums as large as $100,000 are generally directly or indirectly involved); the matter is being strongly pressed or contested in formal proceedings or in negotiations by the individuals, corporations, or government agencies involved.

Examples of D-2 work:

Advising on the legal implications of advertising representations when the facts supporting the representations and the applicable precedent cases are subject to different interpretations.

Reviewing and advising on the implications of new or revised laws affecting the organization.

Presenting the organization's defense in court in a negligence lawsuit which is strongly pressed by counsel for an organized group.

Providing legal counsel on tax questions complicated by the absence of precedent decisions that are directly applicable to the organization's situation.

D-3. Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluation of expert testimony regarding controversial issues in a scientific, financial, corporate organization, engineering, or other highly technical area; the legal matter is of critical importance to the organization and is being vigorously pressed or contested (e.g., sums such as $1 million or more are generally directly or indirectly involved).

Examples of D-3 work:

Advising on the legal aspects and implications of Federal antitrust laws to projected greatly expanded marketing operations involving joint ventures with several other organizations.

Planning legal strategy and representing a utility company in rate or government franchise cases involving a geographic area including parts or all of several States.

Preparing and presenting a case before an appellate court where the case is highly important to the future operation of the organization and is vigorously contested by very distinguished (e.g., having a broad regional or national reputation) legal talent.

Serving as the principal counsel to the officers and staff of an insurance company on the legal problems in the sale, underwriting, and administration of group contracts involving nationwide or multistate coverages and laws.

Performing the principal legal work in a nonroutine major revision of the company's charter or in effectuating new major financing steps.

Responsibility

R-1. Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard practice is involved. Any decisions or actions having a significant bearing on the organization's business are reviewed. (Is given guidance

in the initial stages of assignment, e.g., in planning and organizing legal research and studies. Assignments are then carried out with moderate independence although guidance is generally available. and is sought from time to time on problem points.)

R-2. Usually works independently in investigating the facts, searching legal precedents, defining the legal and factual issues, drafting the necessary legal documents, and developing conclusions and recommendations. Decisions having an important bearing on the organization's business are reviewed. (Receives information from supervisor regarding unusual circumstances or important policy considerations pertaining to a legal problem. If trials are involved, may receive guidance from a supervisor regarding presentation, line of approach, possible line of opposition to be encountered, etc. In the case of nonroutine written presentations, the final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with organization policy. Some (but not all) attorneys make assignments to one or more lower level attorneys, aides, or clerks.)

R-3. Carries out assignments independently and makes final legal determinations in matters of substantial importance to the organization. Such determinations are subject to review only for consistency with company policy, possible precedent effect, and overall effectiveness. To carry out assignments, deals regularly with company officers and top level management officials and confers or negotiates regularly with senior attorneys and officials in other companies or in government agencies on various aspects of assigned work. (Receives little or no preliminary instruction on legal problems and a minimum of technical legal supervision. May assign and review work of a few attorneys, but this is not a primary responsibility.)

R-4. Carries out assignments which entail independently planning investigations and negotiations on legal problems of the highest importance to the organization and developing completed briefs, opinions, contracts, or other legal products. To carry out assignments, represents the organization at conferences, hearings, or trials and personally confers and negotiates with top attorneys and top-ranking officials in private companies or in government agencies. On various aspects of assigned work may give advice directly and personally to corporation officers and top level managers, or may work through the general counsel of the company in advising officers. (Generally receives no preliminary instruction on legal problems. On matters requiring the concentrated efforts of several attorneys or other specialists, is responsible for directing, coordinating, and reviewing the work of the attorneys involved.)

OR

As a primary responsibility, directs the work of a staff of attorneys, one, but usually more, of whom regularly performs D-3 legal work. With respect to the work directed, gives advice directly to corporation officers and top managerial officers, or may give such advice through the general counsel. (Receives guidance as to organization policy but no technical supervision or assistance except when requesting advice from, or briefing by, the general counsel on the overall approach to the most difficult, novel, or important legal questions. Usually reports to the general counsel or deputy.)

Computer Programmers/Programmer Analysts

This definition includes both programmers and programmer analysts.

Performs programming services for establishments or for outside organizations who may contract for services. Converts specifications (precise descriptions) about business or scientific problems, typically prepared by (or with the assistance of) a computer systems analyst, into a sequence of detailed instructions to solve problems by electronic data processing (EDP) equipment, i.e., digital computers. Draws program flow charts to describe the processing of data and develops the precise steps and processing logic which, when entered into the computer in coded language (COBOL, FORTRAN, or other programming language), cause the manipulation of data to achieve desired results. Tests and corrects programs and prepares instructions for operators who control the computer during production runs. Analyzes and modifies programs to increase operating efficiency or to respond to changes in work processes; maintains records to document program development and revisions.

At levels I, II, and III, some computer programmers (typically called computer programmer analysts) *may also perform* some systems analysis duties such as: Gathering facts from users to define their business or scientific problems and to investigate the feasibility of solving problems through new or modified computer programs; designing systems to resolve defined problems and providing specifications for data inputs, flow, actions, decisions, and outputs; and participating on a continuing basis in the overall program planning required, along with other EDP personnel and users.

In contrast, at levels IV and V some systems analysis *must be performed* as part of the programming assign-

ment. The systems analysis duties are identified in a separate paragraph at levels, I, II, III, and IV and are part of each alternative described at level V.

Excluded are:

a. Positions which require a bachelor's degree in a specific scientific field (other than computer science), such as an engineering, mathematics, physics, *or* chemistry degree; however, positions are potential matches where the required degree may be from *any* of several possible scientific fields;

b. Computer systems analysts who *primarily* perform the kinds of duties identified in the paragraphs explaining systems analysis duties;

c. Computer programmers who perform level IV or V programming duties but who *perfrom no system analysis;*

d. Workers who *primarily* analyze and evaluate problems concerning *computer equipment* or its selection or utilization relative to meeting the organization's needs;

e. Positions *not* requiring; (1) *Three* years of administrative, technical, or *substantive* clerical experience; (2) a bachelor's degree in any field; or (3) any equivalent combination of experience and education yielding basic skills in problem analysis and communication.

f. Computer systems programmers or analysts who *primarily write programs or analyze problems concerning the system sofware,* e.g., operating systems compilers, assemblers, system utility routines, etc., which provide basic services for the use of all programs and provide for the scheduling of the execution of programs; however, *positions matching this definition may develop a "total package"* which includes not only writing the program to process the data but also selecting the computer equipment and system software required; and

g. Employees who have significant responsibility for the management or supervision of workers (e.g., systems analysts) whose positions are *not* covered in this definition; or employees with significant responsibility for *other functions* such as payroll, accounting, the operation of the computer, the system software, etc.

Positions are classified into levels based on the following definitions.

Computer Programmer/Programmer Analyst I

At this trainee level, assignments are usually planned to develop basic programming skills because incumbents are typically inexperienced in applying such skills on the job. Assists higher level staff by performing elementary programming tasks which concern limited and simple data items and steps and which closely follow patterns of previous work done in the organization, e.g., drawing flow chrts, writing operator instructions, or coding and testing routines to accumulate counts, tallies, or summaries. May perform routine progamming assignments (as described in level II) under close supervision.

In addition, as training and to assist a higher level analyst, computer programmer analysts *may perform* elementary fact-finding concerning a specified work process, e.g., a file of clerical records which is treated as a unit (invoices, requistions, or purchase orders, etc.); reports findings to higher level analyst.

Incumbents at level I receive classroom and/or on-the-job training in computer programming concepts, methods, and techniques and in the basic requirements of the subject-matter area. May receive training in elementary fact-finding. Detailed, step-by-step instructions are given for each task and any deviation must be authorized by a supervisor. Work is closely monitored in progress and reviewed in detail upon completion.

Computer Programmer/Programmer Analyst II

At this level, initial assignments are designed to develop competence in applying established programming procedures to routine problems. Performs routine programming assignments that do not require skilled background experience but do require knowledge of established programming procedures and data processing requirements. Works according to clear-cut and complete specifications. The data are refined and the format of the final product(s) is very similar to that of the input or is well defined when significantly different, i.e., there are few, if any, problems with interrelating varied records and outputs.

Maintains and modifies routine programs. Makes approved changes by amending the program flow chart, developing the detailed processing logic, and coding the changes. Tests and documents modifications and writes the operator instructions. May write routine new programs using prescribed specifications; may confer with the EDP personnel to clarify procedures, processing logics, etc.

In addition and as continued training, computer programmer analysts may evaluate simple interrelationships in the immediate programming area, e.g., whether a contemplated change in one part of a simple program would cause unwanted results in a related part; confers with user representatives to gain an understanding of the situation sufficient to formulate the needed change; implements the change upon approval of the supervisor or higher level analyst. A higher level analyst provides the incumbent with charts, narrative description of the functions performed, an approved statement of the product desired (e.g., a change in a local establishment report), and the inputs, outputs, and record formats.

Incumbents at level II review objectives and assignment details with higher level staff to insure thorough understanding; they use judgment in selecting among authorized procedures and seek assistance when guidelines are inadequate or significant deviations are

proposed, or when unanticipated problems arise. Work is usually monitored in progress; all work is reviewed upon completion for accuracy and compliance with standards.

Computer Programmer/Programmer Analyst III

As a fully qualified computer programmer, applies standard programming procedures and detailed knowledge of pertinent subject matter (e.g., work processes, governing rules, clerical procedures, etc.) in a programming area such as: A recordkeeping operation (supply, personnel and payroll, inventory, purchasing, insurance payments, depositor accounts, etc.); a well-defined statistical or scientific problem; or other standardized operation or problem. Works according to approved statements of requirements and detailed specifications. While the data are clear-cut, related, and equally available, there may be substantial interrelationships of a variety of records, and several varied sequences or formats are usually produced. The programs developed or modified typically are linked to several other programs in that the output of one becomes the input for another. Recognizes probable interactions of other related programs with the assigned programs(s) and is familar with related system software and computer equipment. Solves conventional programming problems. (In small organizations, may maintain programs which concern or combine several operations, i.e., users, or develop programs where there is one primary user and the others give input.)

Performs such duties as: Develops, modifies, and maintains assigned programs; designs and implements modifications to the interrelation of files and records within the program in consultation with a higher level analyst; monitors the operation of assigned programs and responds to problems by diagnosing and correcting errors in logic and coding; implements and/or maintains assigned portions of a scientific programming project, applying established scientific programming techniques to a well-defined mathematical, statistical, engineering, or other scientific problem usually requiring the translation of mathematical notation in specifications into processing logic and code. (Scientific programming includes assignments such as: The use of a predetermined physical law expressed in mathematical terms to relate one set of data to another set of data; the routine storage and retrieval of field test data; the use of procedures for real-time command and control, scientific data reduction, signal processing, or similar areas.) Tests and documents work and writes and maintains operator instructions for assigned programs. Confers with other EDP personnel to obtain or provide factual data.

In addition, computer programmer analysts may carry out fact-find and analysis of a single activity or routine problem, applying established procedures where the nature of the program, feasibility, computer equipment, and programming language have already been decided. May analyze present performance of a routine program and take action to corect deficiencies based on discussion with the user and consultation with and approval of the supervisor or higher level analyst. May assist in the review and analysis of detailed program specifications and in program design to meet changes in work processes.

Incumbents at level III work independently under specified objectives; apply judgment in devising program logic and in selecting and adapting standard programming procedures; resolve problems and deviations according to established practices; and obtain advice where precedents are unclear or not available. Completed work is reviewed for conformance to standards, timeliness, and efficiency. May guide or instruct lower level programmers and/or programmer analysts; may supervise technicians and others who assist in the specific assignment.

OR

Works on complex programs (as described in level IV) under close direction of higher level staff or supervisor. May assist higher level staff by independently performing less difficult tasks assigned, and performing more difficult tasks under close supervision.

Computer Programmer/Programmer Analyst IV

Applies expertise in programming procedures to assigned complex programs; recommends the redesign of the programs, investigates and analyzes feasibility and program requirements, and develops programming specifications. Assigned complex programs typically affect a broad multiuser computer system which meets the data processing needs of a broad area (e.g., manufacturing, logistics planning, finance management, human resources, material management, etc.) or a computer system for a project in engineering, research, accounting, statistics, etc. Plans the full range of programming actions to produce several interrelated but different products from numerous and diverse data elements which are usually from different sources; solves difficult programming problems. Uses systems analysis techniques relevant to the assignment and knowledge of pertinent system software, computer equipment, work processes, regulations, and management practices. As necessary, integrates facets of the work performed by others.

Performs such duties as: Develops, modifies, and maintains assigned complex programs; designs and implements the interrelation of files and records within the program which will effectively fit into the overall design of the project; working with problems or concepts, develops programs for the solution to major scientific computational problems requiring the analysis and

development of logical or mathematical descriptions of functions to be programmed; develops a major program system, e.g., a sales accounting system or a resources planning system; develops occasional special programs, e.g., a critical path analysis program to assist in managing a special project. Tests, documents, and writes operating instructions for all work. Confers with other EDP personnel to secure information, investigate and resolve problems, and coordinate work efforts.

In addition, the computer programmer analyst performs such duties as: Recommends the redesign of assigned programs and carries out studies by investigating the feasibility of alternative design approaches to determine the best balanced solution, e.g., one that will best satisfy immediate user needs, facilitate subsequent modificaiton, and conserve resources; on typical maintenance projects and smaller scale, limited new projects, assists user personnel in defining the problem or need and determines how the work should be organized, the necessary files and records, and their interrelation within the program; or larger or more complicated projects, usually participates as a team member along with other EDP personnel and users and is typically assigned a portion of the project.

Incumbents at level IV work independently under overall objectives and direction, apprising the supervisor about progress and unusual complications. Modifies and adapts precedent solutions and proven approaches. Guidelines include constraints imposed by the related programs with which the incumbent's programs must be meshed. Completed work is reviewed for timeliness, compatibility with other work, and effectiveness in meeting requirements. May function as team leader or supervise a few lower level programmers and/or programmer analysts or technicians on assigned work.

Computer Programmer/Programmer Analyst V

At level V, workers are typically either suprvisors, team leaders, staff specialists, or consultants. Some systems analyst work is included as a part of the programming assignment. However, the overall system requirements for broad new projects or for complex new scientific systems are defined by higher level analysts, specialists, or scientists. Supervision and review are similar to level IV.

Typical duties and responsibilities. One or more of the following:

1. *In a supervisory capacity,* plans, develops, coordinates, and directs a large and important programming project (finance, manufacturing, sales/marketing, human resources, or other broad area) or a number of small programming projects with complex features. A substantial portion of the work supervised (usually 2 to 3 workers) is comparable to that described for level IV. Supervises, coordinates and reviews the work of a small staff, normally not more than 15 programmers, programmer analysts, and technicians; estimates personnel needs and schedules, assigns, and reviews work to meet completion date. These day-to-day supervisors evaluate performance, resolve complaints, and make recommendations on curtailing projects, reorganizing, or reallocating resources.
2. *As team leader, staff specialist, or consultant,* defines complex scientific problems (e.g., computational) or other highly complex programming problems (e.g., generating overall forecasts, projections, or other new data fields widely different from source data or untried at the scale proposed) and directs the development of computer programs for their solution; or, designs improvements in complex programs where existing precedents provide little guidance, such as an interrelated group of mathematical/statistical programs which support health insurance, natural resources, marketing trends, or other research activities, and may lead a design group responsible for maintaining and improving the system. In conjunction with users (scientists or specialists), defines major problems in the subject-matter area and analyzes and revises existing system logic difficulties. Contacts coworkers and user personnel at various locations to plan and coordinate project and gather data; devises ways to obtain data not previously available; arbitrates differences between various program users when conflicting requirements arise. May perform simulation studies to determine effects of changes in computer equipment or system software or may assess the feasibility and soundness of proposed programming projects which are novel and complex. Typically develops programming techniques and procedures where few precedent exist. May be assisted on projects by other program analysts, programmers or technicians.

NOTE: Excluded are programmer/analysts above level V (working in the computer industries) who develop technology for entirely new application systems for future marketing (e.g., 5-8 years).

Buyers

BUYER

Purchases materials, supplies, equipment, and services (e.g., utilities, maintenance, and repair). In some instances, items are of types that must be specially designed, produced, or modified by the vendor in accordance with drawings or engineering specifications.

Solicits bids, analyzes quotations received, and selects or recommends supplier. May interview prospective

vendors. Purchases items and services at the most favorable price consistent with quality, quantity, specification requirements, and other factors. Prepares or supervises preparation of purchase orders from requisitions. May expedite delivery and visit vendors' offices and plants.

Normally, purchases are unreviewed when they are consistent with past experience, and are in conformance with established rules and policies. Proposed purchase transactions that deviate from the usual or from past experience in terms of prices, quality of items, quantities, etc., or that may set precedents for future purchases are reviewed by higher authority prior to final action.

In addition to the work described above, some (but not all) buyers direct the work of one or a few clerks who perform routine aspects of the work. As a secondary and subsidiary duty, some buyers may also sell or dispose of surplus, salvage, or used materials, equipment, or supplies.

NOTE: Some buyers are responsible for the purchasing of a variety of items and materials. When the variety includes items and work described at more than one of the following levels, the position should be considered to equal the highest level that characterizes at least a substantial portion of the buyer's time.

Excluded are:

a. Buyers of items for direct sale, either wholesale or retail;

b. Brokers and dealers buying for clients or for investment purposes;

c. Positions that specifically require professional education and qualifications in a physical science or in engineering (e.g., chemist, mechanical engineer);

d. Buyers who specialize in purchasing a single or a few related items of highly variable quality such as raw cotton or wool, tobacco, cattle, or leather for shoe uppers, etc. Expert personal knowledge of the item is required to judge the relative value of the goods offered, and to decide the quantity, quality, and price of each purchase in terms of its probable effect on the organization's profit and competitive status.

e. Buyers whose principal responsibility is the supervision of a purchasing program;

f. Persons predominantly concerned with contract or subcontract administration;

g. Persons whose major duties consist of ordering, reordering, or requisitioning items under existing contracts; and

h. Positions restricted to clerical functions or to purchase expediting work; and

i. Positions not requiring: (1) Three years of administrative, technical, or substantive clerical experience; (2) a bachelor's degree in any field; or (3) any equivalent combination of experience and education yielding basic skills in problem analyses and communication.

Buyer I

Purchases "off-the-shelf" types of readily available, commonly used materials, supplies, tools, furniture, services, etc.

Transactions usually involve local retailers, wholesalers, jobbers, and manufacturers' sales representatives.

Quantities purchased are generally small amounts, e.g., those available from local sources.

Examples of items purchased include: Common stationery and office supplies; standard types of office furniture and fixtures; standard nuts, bolts, screws; janitorial and common building maintenance supplies; or common utility services or office machine repair services.

Buyer II

Purchases "off-the-shelf" types of standard, generally available technical items, materials, and services. Transactions may involve occasional modification of standard and common usage items, materials, and services, and include a few stipulations about unusual packing, marking, shipping, etc.

Transactions usually involve dealing directly with manufacturers, distributors, jobbers, etc.

Quantities of items and materials purchased may be relatively large, particularly in the case of contracts for continuing supply over a period of time.

May be responsible for locating or promoting possible new sources of supply. Usually is expected to keep abreast of market trends, changes in business practices in the assigned markets, new or altered types of materials entering the market, etc.

Example of items purchased include: Standard industrial types of handtools; gloves and safety equipment; standard electronic parts, components, and component test instruments; electric motor; gasoline service station equipment; PBX or other specialized telephone services; special-purpose printing services; and routine purchases of common raw materials such as standard grades and sizes of steel bars, rods, and angles.

Also included at this level are buyers of materials of the types described for buyer I when the quantities purchased are large so that local sources of supply are generally inadequate and the buyer must deal directly with manufacturers on a broader than local scale.

Buyer III

Purchases items, materials, or services of a technical and specialized nature. The items, while of a common general type, are usually made, altered, or customized to meet the user's specific needs and specifications.

Transactions usually require dealing with manufacturers. The number of potential vendors is likely to be small and price differentials often reflect important fac-

tors (quality, delivery dates and places, etc.) that are difficult to evaluate.

The quantities purchased of any item or service may be large.

Many of the purchases involve one or more of such complications as: Specifications that detail, in technical terms, the required physical, chemical, electrical, or other comparable properties; special testing prior to acceptance; grouping of items for lot bidding and awards; specialized processing, packing, or packaging requirements; export packs; overseas port differentials; etc.

Is expected to keep abreast of market and product developments. May be required to locate new sources of supply.

Some positions may involve *assisting* in the training or supervising of lower level buyers or clerks.

Examples of items purchased include: Castings; special extruded shapes of normal size and material; special formula paints; electric motors of special shape or speeds; production equipment; special packaging of items; and raw materials in substantial quantities or with special characteristics.

Buyer IV

Purchases highly complex and technical items, materials, or services, usually those specially designed and manufactured exclusively for the purchaser.

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom-designed items according to complex and rigid specifications.

Quantities of items and materials purchased are often large in order to satisfy the requirements for an entire large organization for an extended period of time. Complex schedules of delivery are often involved. Buyer determines appropriate quantities to be contracted for at any given period of time.

Transactions are often complicated by the presence of one or more such matters as inclusion of: Requirements for spare parts, preproduction samples and testing, or technical literature; or patent and royalty provisions.

Keeps abreast of market and product developments. Develops new sources of supply.

In addition to the work described above, a few positions may also require supervision over a few lower level buyers or clerks. (No position is included in this level *solely* because supervisory duties are performed.)

Examples of items purchased include: Special-purpose high-cost machine tools and production facilities; specialized condensers, boilers, and turbines; raw materials of critically important characteristics or quality; parts, subassemblies, components, etc., specially designed and made to order (e.g., communications equipment for installation in aircraft being manufactured; component assemblies for missiles and rockets; and motor vehicle frames).

NOTE: Excluded are buying positions above level IV. Some buyers above level IV make purchases in such unusually large quantities that they can affect the market price of a commodity or produce other significant effects on the industry or trade concerned. Others may purchase items of either (1) extraordinary technical complexity, e.g., involving the outermost limits of science or engineering, or (2) unusually high individual or unit value. Such buyers often persuade suppliers to expand their plants or convert facilities to the production of new items or services. These types of buying functions are often performed by program managers or company officials who have primary responsibilities other than buying.

Chemists and Engineers

CHEMIST

Performs professional work in research, development, interpretation, and analysis to determine the composition, molecular structure, and properties of substances; to develop or investigate new materials and processes; and to investigate the transformations which substances undergo. Work typically requires a B.S. degree in chemistry or the equivalent in appropriate and substantial college level study of chemistry plus experience.

Chemist I

General characteristics. This is the entry level of professional work requiring a bachelor's degree in chemistry and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional capabilities and to provide experience in the application of training in chemistry as it relates to the company's programs. May also receive formal classroom or seminar-type training. (Terminal positions are excluded.)

Direction received. Works under close supervision. Receives specific and detailed instruction as to required tasks and results expected. Work is checked during progress, and is reviewed for accuracy upon completion.

Typical duties and responsibilities. Performs a variety of routine tasks that are planned to provide experience

and familiarization with the chemistry staff, methods, practices, and programs of the company. The work includes a variety of routine qualitative and quantitative analyses; physical tests to determine properties such as viscosity, tensile strength, and melting point; and assisting more experienced chemists to gain additional knowledge through personal observation and discussion.

Responsibility for direction of others. Usually none.

Chemist II

General characteristics. At this continuing developmental level, performs routine chemical work requiring selection and application of general and specialized methods, techniques, and instruments commonly used in the laboratory, and the ability to carry out instructions when less common or proposed methods or procedures are necessary. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

Direction received. Supervisor establishes the nature and extent of analysis required, specifies methods and criteria on new types of assignments, and reviews work for thoroughness of application of methods and accuracy of results.

Typical duties and responsibilities. Carries out a wide variety of standardized methods, tests, and procedures. In accordance with specific instructions, may carry out proposed and less common ones. Is expected to detect problems in using standardized procedures because of the condition of the sample, difficulties with the equipment, etc. Recommends modifications of procedures, e.g., extending or curtailing the analysis or using alternate procedures, based on knowledge of the problem and pertinent available literature. Conducts specified phases of research projects as an assistant to an experienced chemist.

Responsibility for direction of others. May be assisted by a few aides or technicians.

Chemist III

General characteristics. Performs a broad range of chemical tests and procedures utilized in the laboratory, using judgment in the independent evaluation, selection, and adaptation of standard methods and techniques. May carry through a complete series of tests on a product in its different process stages. Some assignments require a specialized knowledge of one or two common categories of related substances. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

Direction received. On routine work, supervision is very general. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

Typical duties and responsibilities. In accordance with instructions as to the nature of the problem, selects standard methods, tests, or procedures; when necessary, develops or works out alternative or modified methods with supervisor's concurrence. Assists in research by analyzing samples or testing new procedures that require specialized training because (a) standard methods are inapplicable, (b) analytical findings must be interpreted in terms of compliance or noncompliance with standards, or (c) specialized and advanced equipment and techniques must be adapted.

Responsibility for direction of others. May supervise or coordinate the work of a few technicians or aides, and be assisted by lower level chemists.

Chemist IV

General characteristics. As a fully competent chemist in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring (a) mastery of specialized techniques or ingenuity in selecting and evaluating approaches to unforeseen or novel problems, and (b) ability to apply a research approach to the solution of a wide variety of problems and to assimilate the details and significance of chemical and physical analyses, procedures, and tests. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

Direction received. Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

Typical duties and responsibilities. Conducts laboratory assignments requiring the determination and evaluation of alternative procedures and the sequence of performing them. Performs complex, exacting, unusual analytical assignments requiring specialized knowledge of techniques or products. Interprets results, prepares

reports, and may provide technical advice in specialized area.

Responsibility for direction of others. May supervise a small staff of chemists and technicians.

Chemist V

General characteristics. Participates in planning laboratory programs on the basis of specialized knowledge of problems and methods and probable value of results. May serve as an expert in a narrow specialty (e.g., class of chemical compounds, or a class of products), making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects. Development of the knowledge and expertise required for this level of work usually reflects progressive experience through chemist IV.

Direction received. Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity, plans, organizes and directs assigned laboratory programs. Independently defines scope and critical elements of the projects and selects approaches to be taken. A substantial portion of the work supervised is comparable to that described for chemists IV. (2) As individual researcher or worker, carries out project requiring development of new or highly modified scientific techniques and procedures, extensive knowledge of specialty, and knowledge of related scientific fields.

Responsibility for direction of others. Supervises, coordinates, and reviews the work of a small staff of chemists and technicians engaged in varied research and development projects, or a larger group performing routine analytical work. Estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or worker, may be assisted on projects by other chemists or technicians.

Chemist VI

General characteristics. Performs work requiring leadership and expert knowledge in a specialized field, product, or process. Formulates and conducts a systematic attack on a problem area of considerable scope and complexity which must be approached through a series of complete and conceptually related studies, or a number of projects of lesser scope. The problems are complex because they are difficult to define and require unconventional or novel approaches or have other difficult features. Maintains liaison with individuals and units within and outside the organization, with responsibility for acting independently on technical matters pertaining to the field. Work at this level usually requires extensive progressive experience including work comparable to chemist V.

Direction received. Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire chemcial program of a company, when the program is of limited complexity and scope. Activities supervised are of such a scope that they require a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker, determines, conceives, plans, and conducts projects of major importance to the company. Applies a high degree of originality and ingenuity in adapting techniques into original combinations and configurations. May serve as a consultant to other chemists in specialty.

Responsibility for direction of others. Plans, organizes, and supervises the work of a staff of chemists and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual worker or researcher, may be assisted on individual projects by other chemists or technicians.

Chemist VII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive chemical activities. Initiates and maintains extensive contacts with key chemists and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level, individuals will have demonstrated creativity, foresight, and mature judgment in anticipating and solving unprecedented chemical problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse chemical activities.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a chemical program of a company with extensive and diversified scientific requirements, or (b) the entire chemical program of a company where the program is more limited in scope. The overall chemical program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Makes authoritative technical recommendations concerning the scientific objectives and levels of work which will be most profitable in light of company requirements and scientific and industrial trends and developments. Recommends facilities, personnel, and funds required. (2) As individual researcher and consultant, selects problems for research to further the company's objectives. Conceives and plans investigations in which the phenomena and principles are not adequately understood, and where few or contradictory scientific precedents or results are available for reference. Outstanding creativity and mature judgment are required to devise hypotheses and techniques of experimentation and to interpret results. As a leader and authority in the company, in a broad area of specialization, or in a narrow but intensely specialized one, advises the head of a large laboratory or company officials on complex aspects of extremely broad and important programs. Has responsibility for exploring, evaluating, and justifying proposed and current programs and projects and furnishing advice on unusually complex and novel problems in the specialty field. Typically will have contributed innovations (e.g., techniques, products, procedures) which are regarded as significant advances in the field.

Responsibility for direction of others. Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to chemist VI; or, as individual researcher and consultant, may be assisted on individual projects by other chemists and technicians.

Chemists VIII

General characteristics. Makes decisions and recommendations that are authoritative and have a far-reaching impact on extensive chemical and related activities of the company. Negotiates critical and controversial issues with top level chemists and officers of other organizations and companies. Individuals at this level have demonstrated a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive chemical programs and activities of outstanding novelty and importance.[3]

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) the entire chemical program of a company which is of moderate scope, or (b) an important segment of a chemical program of a company with very extensive and highly diversified scientific requirements, where programs are of such complexity and scope that they are of critical importance to overall operations and include problems of extraordinary difficulty that have resisted solution. Decides the kind and extent of chemical programs needed to accomplish the objectives of the company, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant, formulates and guides the attack on problems of exceptional difficulty and marked importance to the company and/or industry. Problems are characterized by the lack of scientific precedents and source materials, or the lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas of considerable novelty and importance. Has made contributions such as new products or techniques, development of processes, etc., which are regarded as major advances in the field.

Responsibility for direction of others. Supervises several subordinate supervisors or team leaders some of whose positions are comparable to chemist VII, or individual researchers some of whose positions are comparable to chemist VII and sometimes chemist VIII. As an individual researcher and consultant, may be assisted on individual projects by other chemists or technicians.

NOTE: Individuals in charge of a company's chemical program may match any of several of the survey job levels, depending on the size and complexity of chemical programs. Excluded from the definition are: (1) Chemists in charge of programs so extensive and complex (e.g., consisting of highly diversified or unusually novel products and procedures) that one or more subordinate supervisory chemists are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of chemical program" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

ENGINEER

Performs professional work in research, develop-

[3] Insufficient data were obtained for level VIII to warrant presentation of average salaries.

ment, design, testing, analysis, production, construction, maintenance, operation, planning, survey, estimating, application, or standardization of engineering facilities, systems, structures, processes, equipment, devices, or materials, requiring knowledge of the science and art by which materials, natural resources, and power are made useful. Work typically requires a B.S. degree in engineering or the equivalent in combined education and experience. (*Excluded* are: Safety engineers, industrial engineers, quality control engineers, sales engineers, and engineers whose primary responsibility is to be in charge of nonprofessional maintenance work.)

Engineer I

General characteristics. This is the entry level of professional work requiring a bachelor's degree in engineering and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional work knowledge and abilities. May also receive formal classroom or seminar-type training. (Terminal positions are excluded.)

Direction received. Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress and is reviewed for accuracy upon completion.

Typical duties and responsibilities. Performs a variety of routine tasks that are planned to provide experience and familiarization with the engineering staff, methods, practices, and programs of the company.

Responsibility for direction of others. Usually none.

Engineer II

General characteristics. At this continuing developmental level, performs routine engineering work requiring application of standard techniques, procedures, and criteria in carrying out a sequence of related engineering tasks. Limited exercise of judgment is required on details of work and in making preliminary selections and adaptations of engineering alternatives. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

Direction received. Supervisor screens assignments for unusual or difficult problems and selects techniques and procedures to be applied on nonroutine work. Receives close supervision on new aspects of assignments.

Typical duties and responsibilities. Using prescribed methods, performs specific and limited portions of a broader assignment of an experienced engineer. Applies standard practices and techniques in specific situations, adjusts and correlates data, recognizes discrepancies in results, and follows operations through a series of related detailed steps or processes.

Responsibility for direction of others. May be assisted by a few aides or technicians.

Engineer III

General characteristics. Independently evaluates, selects, and applies standard engineering techniques, procedures, and criteria, using judgment in making minor adaptations and modifications. Assignments have clear and specified objectives and require the investigation of a limited number of variables. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

Direction received. Receives instructions on specific assignment objectives, complex features, and possible solutions. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

Typical duties and responsibilities. Performs work which involves conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features for which there are precedents. Assignments usually include one or more of the following: Equipment design and development, test of materials, preparation of specifications, process study, research investigations, report preparation, and other activities of limited scope requiring knowledge of principles and techniques commonly employed in the specific narrow area of assignments.

Responsibility for direction of others. May supervise or coordinate the work of drafters, technicians, and others who assist in specific assignments.

Engineer IV

General characteristics. As a fully competent engineer in all conventional aspects of the subject matter of the functional area of the assignments, plans and conducts work requiring judgment in the independent evaluation, selection, and substantial adaptation and modification of standard techniques, procedures, and criteria. Devises new approaches to problems encountered. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions

primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

Direction received. Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

Typical duties and responsibilities. Plans, schedules, conducts, or coordinates detailed phases of the engineering work in a part of a major project or in a total project of moderate scope. Performs work which involves conventional engineering practice but may include a variety of complex features such as conflicting design requirements, unsuitability of standard materials, and difficult coordination requirements. Work requires a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties.

Responsibility for direction of others. May supervise a few engineers or technicians on assigned work.

Engineer V

General characteristics. Applies intensive and diversified knowledge of engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on engineering problems and methods, and represents the organization in conferences to resolve important questions and to plan and coordinate work. Requires the use of advanced techniques and the modification and extension of theories, precepts, and practices of the field and related sciences and disciplines. The knowledge and expertise required for this level of work usually result from progressive experience, including work comparable to engineer IV.

Direction received. Supervision and guidance relate largely to overall objectives, critical issues, new concepts and policy matters. Consults with supervisor concerning unusual problems and developments.

Typical duties and responsibilities. One or more of the following: (1) In a supervisory capacity plans, develops, coordinates, and directs a large and important engineering project or a number of small projects with many complex features. A substantial portion of the work supervised is comparable to that described for engineer IV. (2) As individual researcher or worker, carries out complex or novel assignments requiring the development of new or improved techniques and procedures. Work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods. (3) As staff specialist, develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others. Assesses the feasibility and soundness of proposed engineering evaluation tests, products, or equipment when necessary data are insufficient or confirmation by testing is advisable. Usually performs as a staff advisor and consultant as to a technical specialty, a type of facility or equipment, or a program function.

Responsibility for direction of others. Supervises, coordinates, and reviews the work of a small staff of engineers and technicians; estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or staff specialist, may be assisted on projects by other engineers or technicians.

Engineer VI

General characteristics. Has full technical responsibility for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects concerned with unique or controversial problems which have an important effect on major company programs. This involves exploration of subject area, definition of scope and selection of problems for investigation, and development of novel concepts and approaches. Maintains liaison with individuals and units within or outside the organization with responsibility for acting independently on technical matters pertaining to the field. Work at this level usually requires extensive progressive experience including work comparable to engineer V.

Direction received. Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

Typical duties and responsibilities. One or more of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projeccts or a project of major scope and importance, or (b) is responsible for the entire engineering program of a company when the program is of limited complexity and scope. Extent of responsibilities generally requires a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker conceives, plans, and conducts research in problem areas of considerable scope and complexity. The problems must be approached through a series of complete and conceptually related studies, are difficult to define, require unconventional or novel approaches, and require sophisticated research techniques. Available guides and precedents contain critical gaps, are only partially related to the problem, or may be largely lack-

ing due to the novel character of the project. At this level, the individual researcher generally will have contributed inventions, new designs, or techniques which are of material significance in the solution of important problems. (3) As a staff specialist, serves as the technical specialist for the organization (division or company) in the application of advanced theories, concepts, principles, and processes for an assigned area of responsibility (i.e., subject matter, function, type of facility or equipment, or product). Keeps abreast of new scientific methods and developments affecting the organization for the purpose of recommending changes in emphasis of programs or new programs warranted by such developments.

Responsibility for direction of others. Plans, organizes, and supervises the work of a staff of engineers and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual researcher or staff specialist, may be assisted on individual projects by other engineers or technicians.

Engineer VII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive engineering activities. Initiates and maintains extensive contacts with key engineers and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level, individuals will have demonstrated creativity, foresight, and mature engineering judgment in anticipating and solving unprecedented engineering problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse engineering activities.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of the engineering program of a company with extensive and diversified engineering requirements, or (b) the entire engineering program of a company when it is more limited in scope. The overall engineering program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Extent of responsibilities generally requires several subordinate organizational segments or teams. Recommends facilities, personnel, and funds required to carry out programs which are directly related to and directed toward fulfillment of overall company objectives. (2) As individual researcher and consultant, is a recognized leader and authority in the company in a broad area of specialization or in a narrow but intensely specialized field. Selects research problems to further the company's objectives. Conceives and plans investigations of broad areas of considerable novelty and importance for which engineering precedents are lacking in areas critical to the overall engineering program. Is consulted extensively by associates and others, with a high degree of reliance placed on the incumbent's scientific interpretations and advice. Typically, will have contributed inventions, new designs, or techniques which are regarded as major advances in the field.

Responsibility for direction of others. Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to engineer VI; or, as individual researcher and consultant, may be assisted on individual projects by other engineers and technicians.

Engineer VIII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have a far-reaching impact on extensive engineering and related activities of the company. Negotiates critical and controversial issues with top level engineers and officers of other organizations and companies. Individuals at this level demonstrate a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive engineering programs and activities of outstanding novelty and importance.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a very extensive and highly diversified engineering program of a company, or (b) the entire engineering program of a company when the program is of moderate scope. The programs are of such complexity and scope that they are of critical importance to overall objectives, include problems of extraordinary difficulty that often have resisted solution, and consist of several segments requiring subordinate supervisors. Is responsible for deciding the kind and extent of engineering and related programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant, formulates and guides the attack on problems of exceptional difficulty and marked importance to the company or industry. Problems are characterized by their lack of scientific precedents and source material, or lack of suc-

cess of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas or in an intensely specialized area of considerable novelty and importance.

Responsibility of direction of others. Supervises several subordinate supervisors or team leaders some of whose positions are comparable to engineer VII, or individual researchers some of whose positions are comparable to engineer VII and sometimes engineer VIII. As an individual researcher and consultant, may be assisted on individual projects by other engineers or technicians

NOTE: Individuals in charge of a company's engineering program may match any of several of the survey job levels depending on the size and complexity of engineering programs. Excluded from the definition are: (1) Engineers in charge of programs so extensive and complex (e.g., consisting of research and development on a variety of complex products or systems with numerous novel components) that one or more subordinate supervisory engineers are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of engineering and related programs" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

Technical Support Occupations

ENGINEERING TECHNICIAN

To be covered by these definitions, employees must meet *all* of the following criteria:

1. Provides semiprofessional technical support for engineers working in such areas as research, design, development, testing, or manufacturing process improvement.
2. Work pertains to electrical, electronic, or mechanical components or equipment.
3. Required to have some practical knowledge of science or engineering; some positions may also require a practical knowledge of mathematics or computer science.

Excludes production or maintenance workers, quality control technicians or testers, model makers or other craftworkers, chemical or other nonengineering technicians, civil engineering technicians, drafters, designers, and engineers (who are required to apply a professional knowledge of engineering theory and principles to their duties, unlike higher level engineering technicians who may perform the same duties using only practical skills and knowledge).

Also excludes engineering technicians:

a. Below level I who are limited to simple tasks such as: Measuring items of regular shape with a caliper and omputing cross-sectional areas; identifying, weighing, and marking easy-to-identify items; or recording simple instrument readings at specified intervals; and

b. Above level VI who plan and conduct highly difficult projects or studies where standard engineering methods, procedures, and techniques are rarely applicable and conflicting issues characterize the work.

Engineering Technician I

Performs simple routine tasks under close supervision or from detailed procedures. Work is checked in process or on completion. Performs, at this level, one or a combination of such typical duties as:

Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting.

Performs simple or routine tasks or tests such as tensile or hardness tests; operates and adjusts simple test equipment; records test data.

Gathers and maintains specified records of engineering data such as tests, drawings, etc.; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

Engineering Technician II

Performs standardized or prescribed assignments involving a sequence of related operations. Follows standard work methods on recurring assignments but receives explicit instructions on unfamiliar assignments; technical adequacy of routine work is reviewed on completion; nonroutine work is reviewed in process. Performs, at this level, one or a combination of such typical duties as:

Assembles or constructs simple or standard equipment or parts; may service or repair simple instruments or equipment.

Conducts a variety of standardized tests; may prepare test specimens; sets up and operates standard test equipment; records test data, pointing out deviations resulting from equipment malfunction or observational errors.

Extracts engineering data from various prescribed but nonstandardized sources; processes the data following well-defined methods including elementary algebra and geometry; presents the data in prescribed form.

Engineering Technician III

Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment, using fully applicable precedents.

Receives initial instructions, equipment requirements, and advice from supervisor or engineer as needed; performs recurring work independently; work is reviewed for technical adequacy or conformity with instructions. Performs, at this level, one or a combination of such typical duties as:

Constructs components, subunits, or simple models or adapts standard equipment. May troubleshoot and correct malfunctions.

Conducts various tests or experiments which may require minor modifications in test setups or procedures as well as subjective judgments in measurement; selects, sets up, and operates standard test equipment and records test data.

Extracts and compiles a variety of engineering data from field notes, manuals, lab reports, etc.; processes data, identifying errors or inconsistencies; selects methods of data presentation.

Engineering Technician IV

Performs nonroutine assignments of substantial variety and complexity, using precedents which are not fully applicable. May also plan such assignments. Receives technical advice from supervisor or engineer (as needed; performs recurring work independently); work is reviewed for technical adequacy (or conformity with instructions). May be assisted by lower level technicians and have frequent contact with professionals and others within the establishment. Performs at this level one or a combination of such typical duties as:

Works on limited segment of development project; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments and redesigns as necessary; records and evaluates data and reports findings.

Conducts tests or experiments requiring selection and adaptation or modification of a wide variety of critical test equipment and test procedures; sets up and operates equipment; records data, measures and records problems of sufficient complexity to sometimes require resolution at higher level; analyzes data and prepares test reports.

Extracts and analyzes a variety of engineering data; applies conventional engineering practices to develop or prepare schematics, designs, specifications, parts lists, or makes recommendations regarding these items. May review designs or specifications for adequacy.

Engineering Technician V

Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs, or layouts. Contacts personnel in related activities to resolve mutual problems and coordinate the work; reviews, analyzes, and integrates the technical work of others. Supervisor or professional engineer outlines objectives, requirements, and design approaches; completed work is reviewed for technical adequacy and satisfaction or requirements. May train and be assisted by lower level technicians. Performs at this level one or a combination of such typical duties as:

Designs, develops, and constructs major units, devices, or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; reports results.

Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification, and test procedures; conducts tests, analyzes and evaluates data, and prepares reports on findings and recommendations.

Reviews and analyzes a variety of engineering data to determine requirements to meet engineering objectives; may calculate design data; prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and designs.

DRAFTER

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems, and similar equipment, systems, and assemblies. Drawings are used to communicate engineering ideas, designs, and information in support of engineering fuctions. Uses recognized systems of symbols, legends, shadings, and lines having specific manings in drawings.

The following are excluded when they constitute the primary purpose of the job:

Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;

Illustrating work requiring artistic ability;

Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;

Cartographic work involving the preparation of maps or plats and related materials and drawings of geological structures; and

Supervisory work involving the management of a drafting program or the supervision of drafters when either constitutes the primary purpose of the job.

Positions are classified into levels on the basis of the following definitions.

Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot checked during progress and reviewed upon completion.

NOTE: Excludes drafters performing elementary

tasks while while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts or equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of material, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most propriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Excludes drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex, or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

COMPUTER OPERATOR

Monitors and operates the control console of a digital computer, in accordance with operating instructions, to process data. Work is characterized by the following:

Studies operating instructions to determine equipment setup needed;

Loads equipment with required items (tapes, cards, paper, etc.);

Switches necessary auxiliary equipment into system;

Starts and operates computer;

Responds to operating instructions and computer output instructions;

Reviews error messages and makes corrections during operation *or* refers problems;

Maintains operating record.

May test-run new or modified programs and *assist* in moditying systems or programs. Included within the scope of this definition are fullyqualified computer operators, trainees working to become fully qualified operators, and lead operators providing *technical* assistance to lower level operators.

Computer Operator I

Work assignments consist of on-the-job training (sometimes augmented by classroom training). Operator is provided detailed written or oral guidance before and during assignments and is under close personal supervision.

Computer Operator II

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing (i.e., one program is processed at a time). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by multiprocessing)i.e., simultaneous processing of two or more programs). Operator serves as an assistant operator working under

cedure. Refers problems which do not respond to preplanned procedure.

Computer Operator III

Work assignments are characteized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. In response to computer output instructions or error coditions, applies standard operating or correction procedures. Refers problems which do not respond to preplanned procedures.

OR

Work assignments typically are established production runs (i.e, programs which present few operating problems) executed by serial procesing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provied a solution. Then refers problems or aborts program.

OR

Work assignments are established production runs (i.e., programs which present few operating problems) executed by multiprocessing (i.e, simultaneous processing of two or more programs). In response to computer output instructions or error conditions, applies standard operating or correction procedures. Refers problems which do not respond to preplanned procedures.

Comuter Operator IV

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instruction or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

OR

Work assignments are characterized by the frequent introcution of nre programs, applications, and procedures (i.e, situations which require the operator to adapt to a variety of problems) executed by multiprocessing. In response to computer output instructions or error conditions, applies standard operating or corrective procedures. Refers problems which do not respond to preplanned procedures.

OR

Work assignments are established production runs (i.e., programs which present few operating problems) executed by multiprocessing. Selected from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

Computer Operator V

Work assignments are characterized by the frequent testing and introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). In responding to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, iperator deviates from standard procedures or aborts program. Such actions may materially alter the computer unit's production plans. Advises programmers and subject-matter experts on setup techniques.

Computer Operator VI

In addition to level V characteristics, assignments at this level require a knowledge of program language, computer features, and software systems to *assist* in: (1) Maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; (3) switching to emergency backup procedures.

PHOTOGRAPHER

Takes pictures requiring a knowledge of photographic techniques, and equipment, and processes. Typically, some familiarity with the company's activities (e.g., scientific, engineering, industrial, technical, retail, commercial, etc.) and some artistic ability are needed at the higher levels. Depending on the objectives of the assignment, photographers used standard equipment (including simple still, graphic, and motion picture cameras, video and television hand cameras, and similar commonly used equipment) and/or use special-purpose equipment (including specialized still and graphic cameras, motion picture production, television studio, and high-speed cameras and equipment). At the higher levels, a complex accessory system of equipment *may* be used, as needed, with sound or lighting systems, generators, timing or measurement control mechanisms, or improvised stages or environments, etc. Work of photographers at all levels is reviewed for quality and acceptability. Photographers may also develop, process, and edit film or tape, may serve as a lead photographer to lower level workers, or may do work described at lower levels as needed.[4]

[4] Insufficient data were obtained for levels I and IV to warrant presentation of average salaries.

Excluded are:

a. Workers who have no training or experience in photography techniques, equipment, and processes;

b. Workers who primarily operate reproduction, offset, or copying machines, motion picture projectors, or machines to match, cut, or splice negatives;

c. Workers who *primarily* develop, process, print, or edit potographic film or tape; or develop, maintain, or repair photographic equipment;

d. Workers who *primarily* direct the sequences, actions, photography, sound, and editing of motion pictures of television writers and editors; and

e. Photographers taking pictures for *commercial* newspaper or magazine publishers, television statiosns, or movie producers.

Positions are matched to the appropriate level based on the difficulty of, and responsibility for, the photography performed, including the subject-matter knowledge and artistry required to fulfill the assignment. While the equipment may be an indication of the level of difficulty, photographers at the higher levels may use standard equipment, as needed.

Photographer I

Takes routing pictures in situations where several shots can be taken. Uses standard still cameras for pictures where complications, such as speed, motion, color contrast, or lighting are not present or where there is not particular need to overcome them. Photographs are taken for identification, employee publications, information, or publicity purposes. Workers must be able to focus, center, and provide simple flash-type lighting for an uncomplicated photograph.

Typical subjects are employees who are photographed for identification or publicity of award ceremonies, interviews, banquets, or meeting; or external views of machinery, supplies, eqiupment, buildings, damaged shipments, or other routine subjects photographed to record the condition at a specified time. Assignments are usually performed without direct guidance due to the clear and simple nature of the desired photograph.

Photographer II

Uses standard still cameras, commonly available lighting equipment, and related techniques to take photographs which involve limited problems of speed, motion, color contrast, or lighting. Typically, lthe subjects photographed are similar to those at level I, but the technical aspects require more skill. Based on clear-cut objectives, determines shutter speeds, lens settings and filters, camera anagles, exposure times, and type of film. Requires familiarity with the situation gained from similar past experience to arrange for specific emphasis, balanced lighting, and correction for distortion, etc., as needed. May use 16mm. or 35mm. motion picture cameras for simple shots such as moving equipment, individuals at work or meetings, and the like, where available or simple artificial lighting is used.

Ordinarily there is opportunity for repeated shots or for retakes if the original exposure is unsatisfactory. Consults with supervisor or more experienced photographers when problems are anticipated.

Photographer III

Selects from a range of standard photographic equipment for assignments demanding exact renditions, normally without opportunity for later retakes, when there are specific problems or uncertainties concerning lighting exposure time, color, artistry, etc. Discusses technical requirements with operating officials or supervisor and customizes treatment for each situation according to a detailed request. Varies camera processes and techniques and uses the setting and background to produce esthetic, as well as accurate and informative, pictures. Typically, standard equipment is used at this level although "specialized" photography work is usually performed; may use some special-purpose equipment under closer supervision.

In typical assignments, photographs: Drawings, charts, maps, textiles, etc., requiring accurate computation of reduction ratios and exposure times and precise equipment adjustments; tissue specimens in fine detail and exact color when color and condition of the tissue may deteriorate rapidly; medical or surgical procedures or conditions which normally cannot be recaptured; machine or motor parts to show wear or corrosion in minute wires or gears; specialized real estate or retail goods for company catalogs or litings where saleability is enhanced by the photography; company products, work, construction sites, or patrons in prescribed detail to substantiate legal claims, contracts, etc.; artistic or technical design layouts requiring precise equipment settings; fixed objects on the ground or air-to-air objects which must be captured quickly and require directing the pilot to get the correct angle of approach.

Works independently; solves most problems through consultations with more experienced photographers, if available, or through reference sources.

Photographer IV

Uses special-purpose cameras and related equipment for assignments in which the photographer usually makes all the technical decisions, although the objective of the pictures is determined by operating officials. Conceives and plans the technical photoghraphic effects desired by operating officials and discusses modifications and improvements to their original ideas in light of the potential and limits of the equipment. Improvises photographic methods and techniques or selects and alter secondary photographic features (e.g., scenes, backgroungs, color, lighting) to carry out the desired

primary objectives. Many assignments afford only one opportunity to photograph the subject. Typical examples of equipment used at this level include ultra-high speed, motion picture production, studio television, amination cameras, specialized still and graphic cameras, electronic timing and triggering devices, etc.

Some assignments are characterized by extremes in light values and the use of complicated equipment. Sets up precise photographic measurement and controls equipment; uses high-speed color photography, synchronized stroboscropic (interval) light sources, and/or timed electronic triggering; operates equipment from a remote point; or arranges and uses cameras operating at several thousand frames per second. In other assignments, selects and sets up motion picture or television cameras and accessories and shoots a part of a production or a sequence of scenes, or takes special scenes to be used for background or special effects in the production.

Works under the guidelines and requirements of the subject-matter area to be photographed. Consults with supervisors only when dealing with highly unusual problems or altering existing equipment.

Photographer V

As a top technical expert, exercises imagination and creative ability in response to photography situations requiring novel and unprecedented treatment. Typically performs *one or more* of the following assignments; (1) Develops and adapts photographic equipment or processes to meet new and unprecedented situations, e.g., works with engineers and physicists to develop and modigy equipment for use in extreme conditions such as execessive heat or cold, radiation, high altitude, underwater, wind and pressure tunnels, or explosions; (2) plans and organizes the overall technical photographic coverage for a variety of events and developments in phases of a scientific, industrial, medical, or commercial research project or similar program; or (3) creates the desired illusion or emotional effect through developing trick or special effects photography for novel situations requiring a high degree of ingenuity and imaginative camera work to heighten simulate, or alter reality.

Independently develops, plans, and organizes the overall technical photographic aspects of the assignment in collaboration with operating officials who are responsible for the substance of the project. Uses imagination and creative ability to implement objectives within the capabilities and limitations of cameras and equipment. May exercise limited control over the substance of the event to be photographed by staging the action, suggesting behavior of the principals, and rehearsing the activity before photographs are taken.

NOTE: Excluded are photographers above level V who independently plan the objectives, scope, and substance of the photography for the project in addition to planning the overall technical photographic coverage.

Clerical

ACCOUNTING CLERK

Performs one or more accounting tasks, such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustment to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV *require* a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts,

and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and, if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of complete work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

FILE CLERK

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions.

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject-matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

KEY ENTRY OPERATOR

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disc encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions.

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or intepreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform some routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

MESSENGER

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

Excluded are positions which include any of the following as *significant* duties:

a. Operating motor vehicles;

b. Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items;

c. Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room;

d. Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or

e. Directing other workers.

PERSONNEL CLERK/ASSISTANT (EMPLOYMENT)

Personnel clerks/assistants (employment) provide clerical and technical support to personnel professionals or managers in matters relating to recruiting, hiring, transfer, change in pay status, and termination of company employees. At the lower levels, clerks/assistants primarily provide basic information to current and prospective employees, maintain personnel records and information listings, and prepare and process papers on personnel actions (hires, transfers, changes in pay, etc.). At the higher levels, clerks/assistants (often titled personnel assistants or specialists) may perform limited aspects of a personnel professional's work, e.g., interviewing candidates, recommending placements, and preparing personnel reports. Final decisions on personnel actions are made by personnel professionals or managers. Some clerks/assistants may perform a limited amount of work ther specialties, such as benefits, compensation, or employee relations. Typing may be required at any level.

Excluded are:

a. Workers who primarily compute and process payrolls or compute and/or respond to questions on company benefits or retirement claims;

b. Workers who receive additional pay primarily for maintaining and safeguarding personnel record files for a company;

c. Workers whose duties do not require a knowledge of the company's personnel rules and procedures, such as receptionists, messengers, typists, or stenographers;

d. Workers in positions requiring a bachelor's degree; and

e. Workers who are primarily compensated for duties outside the employment specialty, such as benefits, compensation, or employee relations.

Positions are classified into levels on the basis of the following defintions. The work described is essentially at a responsible clerical level at the low levels and progresses to a staff assistant or technician level. At level III, which is transitional, both types of work are described. Jobs which match either type of work described at level III, or which are combinations of the two, can be matched.

Personnel Clerk/Assistant (Employment) I

Performs routine tasks which require a knowledge of company personnel procedures and rules, such as: Providing simple employment information and appropriate lists and forms to applicants or employees on types of jobs being filled, procedures to follow, and where to obtain additional information; ensuring that the proper company forms are completed for name changes, locator information, applications, etc., and reviewing completed forms for signatures and proper entries; or maintaining assigned segments of company personnel records, contacting appropriate sources to secure any missing items, and posting the items, such as, dates of promotion, transfer, and hire, or rates of pay or personal data. (If this information is computerized, skill in coding or entering information may be needed as a minor duty.) May answer outside inquiries for simple factual information, such as verification of dates of employment in response to telephone credit checks on employees. Some receptionist or other clerical duties may be performed. May be assigned work to provide training for a higher level position.

Detailed company rules and procedures are available for all aspects of the assignment. Guidance and assistance on unusual questions are available at all times. Work is spot checked, often on a daily basis.

Personnel Clerk/Assistant (Employment) II

Examines and/or processes personnel action documents using experience in applying company personnel procedures and policies. Ensures that all information is complete and consistent and determines whether further discussion with applicants or employees is needed or whether personnel information must be checked against additional files or listings. Must select the most appropriate precedent, rule, or procedure as a

basis for the personnel action from a number of alternatives. Responds to varied questions from applicants, employees, or managers for readily available information which can be obtained from file material or manuals; responses require skill to secure cooperation in correcting improperly completed personnel action documents or to explain regulations and procedures. May provide information to managers on availability of applicants and status of hiring actions; may verify employment dates and places supplied on job applications; may maintain assigned personnel records; may administer typing and stenography tests.

Completes routine assignments independently. Detailed guidance is available for situations which deviate from established precedents. Clerks/assistants are relied upon to alert higher level clerks/assistants or supervisor to such situations. Work may be spot checked periodically.

Personnel Clerk/Assistant (Employment) III
Type A

Serves as a clerical expert in independently processing the most complicated types of personnel actions, e.g., temporary employment, rehires, and dismissals, and in providing information when it is necessary to consolidate data from a number of sources, often with short deadlines. Screens applications for obvious rejections. Resolves conflicts in computer listings or other sources of employee information. Locates lost documents or reconstructs information using a number of sources. May check references of applicants when information in addition to dates and places of past work is needed, and judgment is required to ask appropriate routine follow-up questions. May provide guidance to lower level clerks. Supervisory review is similar to level II.

AND/OR

Type B

Performs routine personnel assignments beyond the clerical level, such as: Orienting new employees to company programs, facilities, rules on time and attendance, and leave policies; computing basic statistical information for reports on manpower profiles, EEO progress and accomplishments, hiring activities, attendance and leave profiles, turnover, etc.; and screening applicants for well defined positions, rejecting those who do not qualify for available openings for clear-cut reasons, referring others to appropriate employment interviewer. Guidance is provided on possible sources of information, methods of work, and types of reports needed. Completed written work receives close technical review from higher level personnel office employees; other work may be checked occasionally.

Personnel Clerk/Assistant (Employment) IV

Performs work in support of personnel professionals which requires a good working knowledge of personnel procedures, guides, and precedents. In representative assignments: Interviews applicants, obtains references and recommends placement of applicants in a few well-defined occupations (trades or clerical) within a stable organization or unit; conducts post-placement or exit interviews to identify job adjustment problems or reasons for leaving the company; performs routine statistical analyses related to manpower, EEO, hiring, or other employment concerns, e.g., compares one set of data to another set as instructed; and requisitions applicants through employment agencies for clerical or similar level jobs. At this level, assistants typically have a range of personal contacts within and outside the company and with applicants, and must be tactful and articulate. May perform some clerical work in addition to the above duties. Supervisor reviews completed work against stated objectives.

Personnel Clerk/Assistant (Employment) V

Workers at this level perform duties similar to level IV, but are responsible for more complicated cases and work with greater independence. Performs limited aspects of professional personnel work dealing with a variety of occupations common to the company which are clear-cut and stable in employment requirements. Typical duties include: Researching recruitment sources, such as employment agencies or State manpower offices, and advising managers on the availability of candidates in common occupations; screening and selecting employees for a few routine, nonpermanent jobs, such as summer employment; or answering inquiries on a controversial issue, such as a hiring or promotion freeze. These duties often require considerable skill and diplomacy in communications. Other typical duties may include: Surveying managers for future hiring requirements; developing newspaper vacancy announcements or explaining job requirements to employment agencies for administrative or professional positions; or reviewing the effect of corporate personnel procedural changes on local employment programs (e.g., automation of records, new affirmative action goals). May incidentally perform some clerical duties. Supervisory review is similar to level IV.[1]

PURCHASING ASSISTANT

Provides clerical or technical support to buyers or contract specialists who deal with suppliers, vendors, contractors, etc., *outside* the company to purchase goods, materials, equipment, services, etc. Assistants at level I examine requisitions and purchase documents, such as purchase orders, invitations to bid, contracts,

[1] Insufficient data were obtained for level V to warrant presentation of average salaries.

and supporting papers; they review, verify, prepare, or control the documents to assure accuracy, completeness, and correct processing. Assistants at levels II and III may also expedite purchases already made, by contacting vendors and analyzing and reporting on supplier problems related to delivery, availability of goods, or any other part of the purchase agreement. Assistants at level III may also develop technical information for buyers, e.g., comparative information on materials sought. All assignments require a practical knowledge of company purchasing procedures and operations *and* experience in applying company regulations, guidelines, or manuals to specific transactions. Assistants may type the purchasing documents they prepare or may perform work described at lower levels, as needed. Final decisions on purchasing transactions are made by buyers or contract specialists.

Excluded are:

a. Purchasing clerks or assistants, typists, file clerks, secretaries, receptionists, and trainees, who do not *examine* purchase requisitions or other documents to *assure* accuracy, completeness, and correct processing; workers in these excluded positins may prepare and type the final purchase order, entering such prescribed items as quantities, model numbers, addresses, or prices, after a higher level employee screens the requisition and assures the purchase order data are complete and accurate.

b. Workers who process or expedite the purchase of items for direct sale, either wholesale or retail;

c. Workers who as a primary duty: Maintain a filing system or listing to monitor inventory levels; reorder items by phone under ongoing contracts; or receive and disburse supplies and materials for use in the company;

d. Production expediters or controllers who primarily ensure the timely arrival and coordination of purchased materials with assembly line or production schedules and requirements;

e. Purchasing expediters who only check on the status of purchases already made and who do not analyze the facts at hand and do not make recommendations for either extension of delivery dates or for other similar modifications to the purchase agreement, as described at level II, b;

f. Positions which require a technical knowledge of equipment characteristics and parts, production control, or manufacturing methods and procedures;

g. Positions requiring a bachelor's degree; and

h. Buyers.

Positions are classified into levels based on the following definitions according to the complexity of the work, the conditions of the purchase, and the amount of supervision.

Purchasing Assistant I

According to detailed procedures or company regulations, examines documents such as requisitions, purchase orders, invitations to bid, contracts, and supporting papers. Reviews the purchase requisition to determine whether the correct item description, price, quantity, discount terms, shipping instructions, and/or delivery terms have been included and selects the appropriate purchase phrases and forms from prescribed company lists or files. Obtains any missing or corrected information, prepares the purchase order, and gives it to the buyer for approval when satisfied that the information is complete and the computations are accurate. Contacts are usually within the establishment to verify or correct factual information. May contact vendors for information about purchases already made and may reorder items under routine and existing purchase arrangements where few, if any, questions arise. Receives detailed instructions on new assignments. Refers questions to supervisor who may spot check work on a daily basis.

Assistants at this level examine documents for order of standard goods, supplies, equipment, or services, and/or for order of specialized items when the complexity of the item does not affect the assistant's work, i.e., the assistant is *not* required to use considerable judgment to find a previous transaction to use as a guideline, as described at level II, a.

Purchasing Assistant II

Assistants at this level perform assignments described in paragraphs a or b, or a combination of the two.

a. Reviews and prepares purchase documents for specialized items, such as items with optional features or technical equipment requiring precise specifications. Since the transactions usually require special purchasing conditions, e.g., multiple deliveries, provision of spare parts, or renegotiation of terms, considerable judgment is needed to find a previous transaction to use as a guideline; as required, adapts the phrases or clauses in the guideline transaction that apply to the purchase at hand. In some cases, reviews purchasing documents prepared by lower level clerks or prepared by personnel in other company units to detect processing discrepancies or to clarify the purchase papers; corrects clerical errors. May advise company employees on how to prepare requisitions for items to be ordered.

b. Expedites purchases by *making a recommendation for action* based on simple analysis of the facts at hand, company guidelines, and the background of the purchase: Contacts suppliers to obtain information on deliveries or on contracts; based on clear-cut guidelines for each type of purchase and previous performance of supplier, availability of item, or impact of delay, recommends extension of delivery date or other similar modifications. In some cases, decides to refer problems to production, packaging, or other company specialists. May reorder standard items under a variety of existing purchase agreements where judgment is needed to ask further questions and follow-up and coordinate transactions. Assist-

ants at this level expedite purchases of standard goods, supplies, equipment, or services, and/or purchases of specialized items when the complexity of the item does *not* affect the assistant's work, i.e., the assistant does not coordinate requests for minor deviations from contract specifications, etc., as described at level III, b.

Assistants at this level coordinate information with company buyers and with suppliers outside the company and keep others informed of the progress of transactions. Major changes in company regulations and procedures are explained by supervisor. Refers unusual situations to supervisor, who also spot checks all completed work for adequacy.

Purchasing Assistant III

Assistants at this level have a good understanding of purchase circumstances for specialized items—what to buy, where to buy, and under what terms buyers negotiate and make purchases. They perform assignments described in paragraphs a, b, or c, or a combination of any of these.

a. Reviews and prepares purchase documents for highly specialized items where few precedent transactions exist that can be used as guidelines and where provisions such as fixed-price contracts with provisions for escalation, price redetermination, or cost incentives are needed. Complicated provisions for progress payments, for testing and evaluating the ordered item, or for meeting company production schedules may also exist. As necessary, drafts special clauses, terms, or requirements for unusual purchases. Provides authoritative information to others on company purchase procedures and assures that documents and transactions agree with basic procurement policies.

b. Expedites purchases of specialized items (see level II, b.) when the complexity of the items *does* affect the assistant's work. Investigates supplier problems and coordinates requests for minor deviations from the contract specifications with specialists, buyers, suppliers, and users. Recommends revisions to the contract or purchase agreement, if needed, based upon company requirements. May reorder technical and specialized items within existing purchase contracts which contain special purchasing conditions. Questions which arise are handled similarly to those in level II, b.

c. Furnishes technical support to buyers or contract specialists, using a detailed knowledge of company purchasing transactions and procedures, e.g., analyzes bids for contracts to determine the possible number and interest of bidders for *standard* commodities and services; assembles contracts and drafts special clauses, terms, or requirements for unprecedented purchases, e.g., for specially designed equipment or for complex one-time transactions; gathers and summarizes information on the availability of special equipment and the ability of suppliers to meet company needs.

Purchasing assistants at this level receive instructions about new procurement policies. Assistants seek guidance on highly unusual problems but are expected to propose solutions for supervisory approval. Supervisory review is similar to level II; drafts of special clauses, etc., are reviewed in detail.

NOTE: Excluded are higher level workers who: Negotiate agreements with contractors on minor changes in the terms of an established contract; or analyze and make recommendations about porposals of specialized equipment, about the solvency and performance of firms, or about clerical processing methods needed to fit new purchasing policies.

SECRETARY

Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

Exclusions. Not all positions titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows.

a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;

b. Stenographers not fully performing secretarial duties;

c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank;

d. Assistants or secretaries performing any kind of technical work, e.g., personnel accounting, or legal work;

e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1 through LR-4;

f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;

g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;

h. Trainees.

Classification by Level

Secretary jobs which meet the required characteristics are matched at one of five levels according to two fac-

tors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) level of the secretary's responsibility. The table following the explantations of these factors indicates the level of the secretary for each combination of factors.

Level of secretary's supervisors (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

LS-1. Organizational structure is not complex and internal procedures and administrative controls are simple and informal; supervisor directs staff through face-to-face meetings.

LS-2. Organizational structure is complex and is divided into subordinate groups that usually differ from each other as to subject-matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definiton. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor.

The presence of subordnate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work, is places in LS-1.

In smaller organizations or industries such as retail trade, with relataively few organizational levels, the supervisor may have an impact on the policies and may deal with important outside contracts, as descrived in LS-3.

LS-3. Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls. Executive typically has: Financial decisionmaking authority for assigned programs(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Executive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

Level of secretary's responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should bematched at the level best describing their level of responsibility. When a positions's duties span more than one LR level, the introductory paragraph at the beginning of each LR level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

LR-1. Carries out *recurring* office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and chekcs completed work for accuracy. Performs varied duties including or comparable to the following:

a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters.

b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms.

c. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format.

d. Maintains recurring internal reports, such as: Time and leave records, office equipment listings, correspondence controls, training plans, etc.

e. Requisitions, supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

RL-2. Handles differing situations, problems, and deviations in the work of the office according to the supevisor's general instructions, priorities, duties, policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff members, or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name.

b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and asembles established background materials, as directed. May attend meetings and records and report on the proceedings.

c. Reviews outgoing materials and correspondence for internal consistency and conformance with super-

visor's procedures; assures that proper clearances have been obtained, when needed.

d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff.

e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

LR-3. Uses greater judgment and initiative to determine the approach or action to take in nonroutine situations. Interprets and adapts guidelines, including unwritten policies, precednets, and practices, which ae not always completely applicable to changing situations. Duties include or are comparable to the following:

a. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative and general office policies for supervisor's approval.

b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc., and informs supervisor on matters to be considered.

c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff.

d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general direction.

e. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special conferences, reports, inquires, etc. Shifts clerical staff to accommodate workload needs.

LR-4. Handles a wide variety of situation and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:

a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been authorized.

b. Notes commitments made by executive during meeting and arragnes for staff implementation. On own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschecules or refuses appintments or invitations.

c. Reads outging corrsponspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems.

d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background offfice sources; draws attention to important parts or conflicts.

e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in timely manner; decides whether executive should be notified of important or emergency matters.

Excludes secretaries performing any of the following duties:

Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of work in transactions with parties outside the organization.

Prepares agenda for conferences; explains discussion topics to participants; drafts introductions and develops background information and prepares outlines for executive or staff member(s) to use in writing speeches;

Advices individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, Members of Congress, presidents of national unions or large national or international firms, etc.) in unique situtions. These officials may be relatively inaccessible, and each contact typically must be handled differnetly, using judgment and discretion.

Table C-4. Criteria for matching secretaries by level

Level of secretary's supervisor	Level of secretary's responsibility			
	LR-1	LR-2	LR-3	LR-4
LS-1	I	II	III	IV
LS-2	I	III	IV	V
LS-3	I	IV	V	V

STENOGRAPHER

Primary duty is to take dictation using shorthand and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

Excluded from this definition are:

a. Trainee positions not requiring a fully qualified stenographer.

b. Secretaries providing the principal secretarial support in an office and performing more responsible and discretionary .asks, as described in LR-1 thru LR-4 in the secretary definition.

c. Stenographers who take dictation involving the requent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary *cannot* be learned in a relatively short period of time, e.g., a month or two.

d. Stenographers, such as shorthand reporters, who record material vebatim at hearnings, conferences, or similar proceedings.

Stenographer I

Takes and transcribes dictation, receiving specific assignments along with detailed instructions on such requirements as forms and presentation. The transcribed material is typically reviewed in rough draft and the final transcription is reviewed for conformance with the rough drafts. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Takes and transcribes dictation, determining the most appropriate format. Performs stenographic duties requring significantly greater independence and responsibility than stenographer I. Supervisor typically provides general instruction. Work requires a thorough working knowledge of general business and office procedures and of the specific business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining followup files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions; etc.

TYPIST

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously typed items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

b. The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing; and

c. Familiarity with specialized terminology in various keyboard commands to manipulate or edit the recorded text to accomplish revisions, or to perform tasks such as extracting and listing items from the text, or transmitting text to other terminals, or using sort commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or performed paragaphs which can then be coded and stored for future use in letters or documents.

Typist I

Performs *one of more of the following:* Copy typing from rough or clear drafts; or rotine typing forms, insurance policies, etc; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling; syllabification, punctuation, etc., of technical or unusual words or foreign language materials; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

NOTE: The occupational titles[1] and definitions for accounting clerks, drafters, file clerks, key entry operators, stenographers, and typists are the same as those use in the Bureau's program of occupational wage surveys in metropolitan areas.

Revised definitions for stenographer and typist were introduced into the area surveys in calendar year 1981; the 4-level accounting clerks in 1980; and the 5-level drafter in 1979. Three years are required to bring a new job definition into all areas covered by the program.

[1] Before 1981, level designations differed between the area and national surveys. See *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1980*, Bulletin 2081 (Bureau of Labor Statistics, 1980), page 68, for details.

Classification by Standard Occupational Codes

The titles and the 3- or 4-digit codes to the right of the BLS (PATC) occupations in table C + 5 are taken from the 1980 edition of the Standard Occupational Classification Manual (SOC), issued by the U.D. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. For example, the PATC occupations Accountant, Chief Accountant, Auditor, and Public Accountant are all classified in the SOC manuals as accountants and auditors. The SOC occupation (code 1412) includes a variety of accounting occupations (e.g., budget accountants, credit analysts, accounting methods analysts) that are excluded from the PATC description.

Table C-5. Comparison of occupations in the professional, administrative, technical, and clerical (PATC) survey with the Standard Occupational Classificatin Manual

PATC occupation	Standard Occupational Classificatin Manual (SOC)	
	SOC code	**SOC title**
Accountants	1412	Accountants
Chief accountants	1412	Accountants and auditors
Auditors	1412	Accountants and auditors
Public accountants	1412	Accountants and auditors
Job analysts	143	Personnel, training, and labor relations specialists
Directors of personnel	143	Personnel, training, and labor relations specialists
Attorneys	211	Lawyers
Buyers	1449	Purchasing agents and buyers, not elsewhere classified
Programmers/programmer analysts	397	Programmers
	1712	Computer systems analysts
Chemists	1845	Chemists, except biochemists
Engineers	162-3	Engineers
Engineering technicians	371	Electrical and electronic engineering technologists and technicians
Drafters	371	Drafting occupations
Computer operators	4612	Computer operators
Photographers	326	Photographers
Accounting clerks	4712	Bookkeppers and accounting and auditing clerks
File clerks	4696	File clerks
Key entry operators	4793	Data entry operators
Messengers	4745	Messengers
Personnel clerks/assistants	4692	Personnel clerks, except payroll and timekeeping
Purchasing assistants	4664	Order clerks
Secretaries	4622	Secretaries
Stenographers	4623	Stenographers
Typists	4624	Typists

Appendix D. Comparison of Salaries in Private Industry with Salaries of Federal Employees under the General Schedule

The survey was designed to provide a basis for comparing salaries under the General Schedule classification and pay system with salaries in private enterprise. To assure collection of pay data for work levels equivalent to the General Schedule grade levels, the Office of Personnel Management (OPM), in cooperation with the Bureau of Labor Statistics, prepared the occupational work level definitions used in the survey. Definitions were graded by OPM according to standards established for each grade level. Table D-1 shows the surveyed jobs grouped by work levels equivalent to General Schedule grade levels.

Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule

Occupation and level surveyed by BLS[1]	Average annual salary in private industry[2] March 1983	Salary rates for Federal employees under the General Schedule, March 1983[3]										
		Grade[4]	Average[5] March 1983	Step[6]								
				1	2	3	4	5	6	7	8	9	10
File clerks I	$ 9,702	GS 1	$ 8,822	$ 8,676	$ 8,965	$ 9,254	$ 9,542	$ 9,831	$10,000	$10,286	$10,572	$10,585	$10,857
Messengers	10,915												
Accounting clerks I	11,190	GS 2	10,018	9,756	9,987	10,310	10,585	10,703	11,018	11,333	11,648	11,963	12,278
Drafters I	12,142												
File clerks II	10,928												
Key entry operators I	12,583												
Typists I	11,428												
Accounting clerks II	13,466	GS 3	11,412	10,645	11,000	11,355	11,710	12,065	12,420	12,775	13,130	13,485	13,840
Drafters II	15,629												
Engineering technicians I	15,646												
File clerks III	13,699												
Key entry operators II	15,066												
Personnel clerks/assistants I	12,898												
Stenographers I	16,307												
Typists II	15,085												
Accounting clerks III	16,073	GS 4	13,258	11,949	12,347	12,745	13,143	13,541	13,939	14,337	14,735	15,133	15,531
Computer operators I	12,481												
Drafters III	18,401												
Engineering technicians II	18,077												
Personnel clerks/assistants II	15,428												
Purchasing assistants I	14,827												
Secretaries I	14,732												
Stenographers II	19,367												
Accounting clerks IV	19,455	GS 5	15,163	13,389	13,815	14,261	14,707	15,153	15,599	16,045	16,491	16,937	17,383
Accountants I	19,519												
Auditors I	18,723												
Buyers I	19,120												
Chemists I	21,365												
Computer operators II	14,648												
Drafters IV	22,454												
Engineers I	25,556												
Engineering technicians III	21,460												
Job analysts I	19,894												
Personnel clerks/assistants III	17,310												
Photographers II	20,439												
Purchasing assistants II	18,801												
Secretaries III	16,301												
Programmers/programmer analysts I	19,777												
Computer operators III	16,988	GS 6	17,132	14,901	15,398	15,895	16,392	16,889	17,386	17,883	18,380	18,877	19,374
Personnel clerks/assistants IV	20,196												
Purchasing assistants III	24,064												
Secretaries III	18,254												
Accountants II	23,264	GS 7	18,786	16,559	17,111	17,663	18,215	18,767	19,319	19,871	20,423	20,975	21,527
Auditors II	23,293												
Buyers II	23,633												
Chemists II	24,341												
Computer operators IV	20,727												
Drafters V	27,795												
Engineers II	27,769												
Engineering technicians IV	25,061												
Job analysts II	21,992												
Photographers III	24,425												
Public accountants I	18,669												

See footnotes at end of table.

Table D-1. Continued—Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule

Occupation and level surveyed by BLS[1]	Average annual salary in private industry[2] March 1983	Salary rates for Federal employees under the General Schedule, March 1983[3]										
		Grade[4]	Average[5] March 1983	Step[6]								
				1	2	3	4	5	6	7	8	9	10
Secretaries IV	$20,232												
Programmers/programmer analysts II	26,427												
Computer operators V	24,307	GS 8	$21,315	$18,339	$18,950	$19,561	$20,172	$20,783	$21,394	$22,005	$22,616	$23,227	$23,838
Secretaries V	23,317												
Accountants III	27,346	GS 9	22,731	20,256	20,931	21,606	22,281	22,956	23,631	24,306	24,981	25,656	26,331
Attorneys I	28,119												
Auditors III	28,245												
Buyers III	29,033												
Chemists III	29,413												
Computer operators VI	25,206												
Engineers III	31,307												
Engineering technicians V	28,320												
Job analysts III	26,427												
Photographers IV	26,815												
Public accountants II	20,575												
Programmer/programmer analysts III	26,224												
Accountants IV	34,244	GS 11	27,723	24,508	25,325	26,142	26,959	27,776	28,593	29,410	30,227	31,044	31,861
Attorneys II	34,502												
Auditors IV	34,091												
Buyers IV	35,570												
Chemists IV	35,439												
Chief accountants I	33,683												
Directors of personnel I	32,678												
Engineers IV	36,726												
Job analysts IV	33,084												
Public accountants III	24,278												
Programmers/programmer analysts IV	31,446												
Accountants V	41,862	GS 12	33,489	29,374	30,353	31,332	32,311	33,290	34,269	35,248	36,227	37,206	38,185
Attorneys III	42,271												
Chemists V	42,892												
Chief accountants II	41,664												
Directors of personnel II	42,045												
Engineers V	43,720												
Public accountants IV	29,134												
Programmers/programmer analysts V	38,125												
Accountants VI	51,798	GS 13	40,319	34,930	36,094	37,258	38,422	39,586	40,750	41,914	43,078	44,242	45,406
Attorneys IV	53,184												
Chemists VI	51,028												
Chief accountants III	53,286												
Directors of personnel III	51,296												
Engineers VI	51,460												
Attorneys V	65,607	GS 14	47,941	41,277	42,653	44,029	45,405	46,781	48,157	49,533	50,909	52,285	53,661
Chemists VII	60,471												
Chief accountants IV	67,919												
Directors of personnel IV	62,645												
Engineers VIII	58,167												
Attorneys VI	84,917	GS 15	56,305	48,553	50,171	51,789	53,407	55,025	56,643	58,261	59,879	61,497	63,115
Engineers VIII	66,938												

See footnotes at end of table.

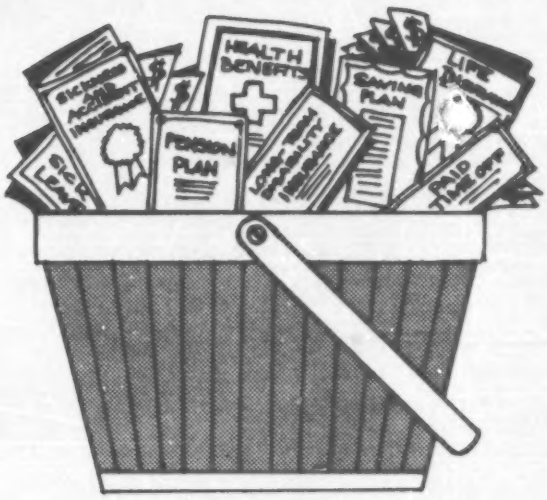
Footnotes to table D-1

[1] For definitions, see appendix C.
[2] Survey findings as summarized in table 1 of this bulletin. For scope of survey, see appendix A.
[3] General Schedule rates in effect in March 1983, the reference date of the PATC survey.
[4] Corresponding grades in the General Schedule were supplied by the Office of Personnel Management.
[5] Mean salary of all General Schedule employees in each grade as of Mar. 31, 1983. Not limited to Federal employees in occupations surveyed by BLS.
[6] Section 5335 of title 5 of the U.S. Code provides for within-grade increases on condition that the employee's work is of an acceptable level of competence as defined by the head of the agency. For employees who meet this condition, the service requirements are 52 calendar weeks for each advancement to salary rates 2, 3, and 4; 104 weeks for each advancement to salary rates 5, 6, 7; and 156 weeks for each advancement to salary rates 8, 9, and 10. Section 5336 provides that an additional within-grade increase may be granted within any 52-week period in recognition of high quality performance above that ordinarily found in the type of position concerned.
[7] The rate of pay for employees at some steps is limited by section 5306 of title 5 of the U.S. Code to the rate of level V of the Executive Schedule, $57,500.

NOTE: Under Section 5303 of title 5 of the U.S. Code, higher minimum rates (but not exceeding the maximum salary rate prescribed in the General Schedule for the grade or level) and a corresponding new salary range may be established for positions or occupations under certain conditions. The conditions include a finding that the Government's recruitment or retention of well-qualified persons is significantly handicapped because the salary rates in private industry are substantially above the salary rates of the statutory pay schedules. As of March 1983, special higher salary rates were authorized for professional engineers at the entry grades (GS-5 and GS-7), and at GS-9 and GS-11. In addition, special rates were authorized for mining engineers at GS-5 through GS-14. Information on special salary rates, including the occupations and the areas to which they apply, may be obtained from the Office of Personnel Management, Washington, D.C. 20415, or its regional offices.

* U.S. GOVERNMENT PRINTING OFFICE: 1983-381-017:505

Employee Benefits in Medium and Large Firms



U.S. Department of Labor
Bureau of Labor Statistics
Bulletin 2176

The Bureau of Labor Statistics issues its 1982 bulletin on employee benefits in medium and large firms. This survey is the fourth in an annual series.

Data available

- Incidence and detailed characteristics of 11 private sector employee benefits paid for at least in part by the employer: Lunch and rest periods, holidays, vacations, and personal and sick leave; sickness and accident, long-term disability, health, and life insurance; and private retirement pension plans.
- Incidence data on 18 other employee benefits, including stock, savings and thrift, and profit sharing plans; employee discounts; and educational assistance.
- Data presented separately for three occupational groups—professional-administrative, technical-clerical, and production workers.

Coverage

- Major benefits in medium and large firms, nationwide.
- Minimum employment in establishments covered is generally 100 to 250 employees, depending on the industry.

Source of data

- Sample of about 1,500 establishments in a cross-section of the Nation's private industries; primarily by personal interview.

Uses

- Benefit administration in public and private employment.
- Union contract negotiations.
- Conciliation and arbitration in public and private sectors.
- Development of legislation affecting the welfare of workers.

Please send your order to the Bureau of Labor Statistics Regional Office nearest you:

1603 JFK Federal Building
Government Center
Boston, Mass. 02203

1515 Broadway, Suite 3400
New York, N.Y. 10036

3535 Market Street
P. O. Box 13309
Philadelphia, Pa. 19101

1371 Peachtree, NE
Atlanta, Ga. 30367

9th Floor
Federal Office Building
230 S. Dearborn Street
Chicago, Ill. 60604

[illegible] Floor
555 Griffin Square Building
Dallas, Tex. 75202

911 Walnut Street
Kansas City, Mo. 64106

450 Golden Gate Avenue,
Box 36017
San Francisco, Calif. 94102

You may also send your order directly to:

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Order form

Please send_____copies of ***Employee Benefits in Medium and Large Firms, 1982***, Bulletin 2176, Stock No. 029-001-02761-3 at $4.50 each for a total of_____.

☐ Enclosed is a check or money order payable to Superintendent of Documents.

☐ Charge to GPO Deposit Account No._____ Order No. _____

☐ Credit Card Orders—MasterCard or Visa, on orders to Superintendent of Documents only.

Total charges $ _____.

Credit Card No. _____

Expiration Date
Month/Year _____

Name _____

Address _____

City, State, Zip Code _____

Bureau of Labor Statistics
Regional Offices

Region I
1603 JFK Federal Building
Government Center
Boston, Mass. 02203
Phone: (617) 223-6761

Region II
Suite 3400
1515 Broadway
New York, N.Y. 10036
Phone: (212) 944-3121

Region III
3535 Market Street
P.O. Box 13309
Philadelphia, Pa. 19101
Phone: (215) 596-1154

Region IV
1371 Peachtree Street, N.E.
Atlanta, Ga. 30367
Phone: (404) 881-4418

Region V
9th Floor
Federal Office Building
230 S. Dearborn Street
Chicago, Ill. 60604
Phone: (312) 353-1880

Region VI
Second Floor
555 Griffin Square Building
Dallas, Tex. 75202
Phone: (214) 767-6971

Regions VII and VIII
911 Walnut Street
Kansas City, Mo. 64106
Phone: (816) 374-2481

Regions IX and X
450 Golden Gate Avenue
Box 36017
San Francisco, Calif. 94102
Phone: (415) 556-4678

BEST COPY AVAILABLE